

THE MUSIC MARVEL

Public Building: MUSIC MARVEL
Music & Popular Culture Re-Wired
AR3AP100 MSc3/4 2021-22

Student: Dimitrije Milic

Responsible instructor: Prof. ir. Nathalie de Vries

Course coordinator: Ir. Paul Kuitenbrouwer

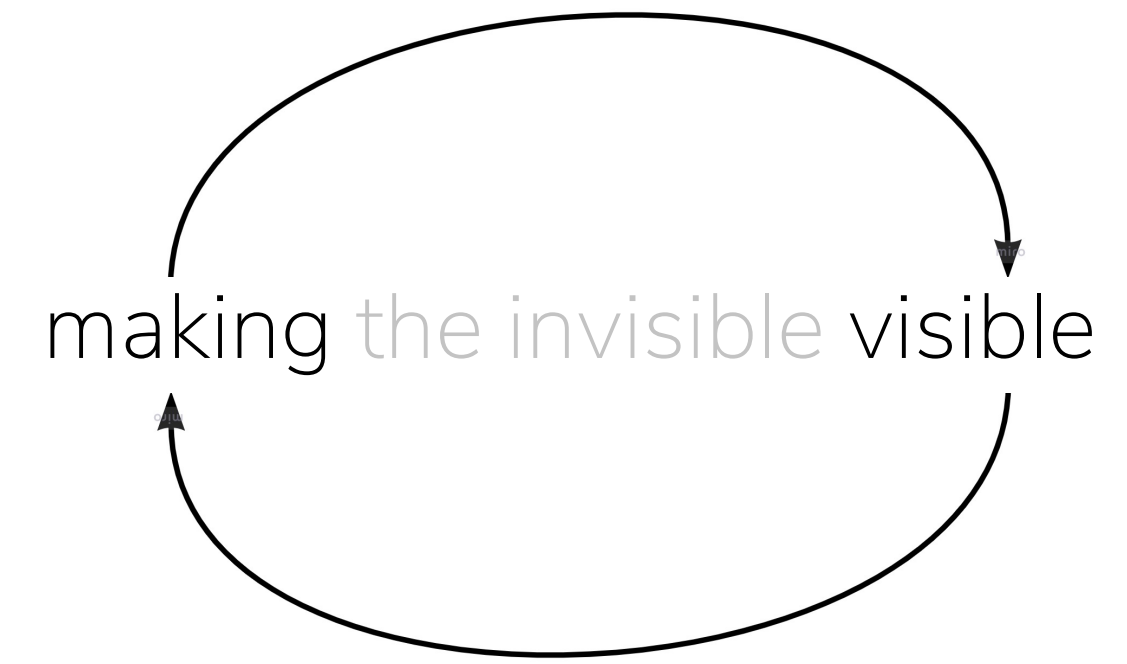
Tutors: Ir. Henk Bultstra

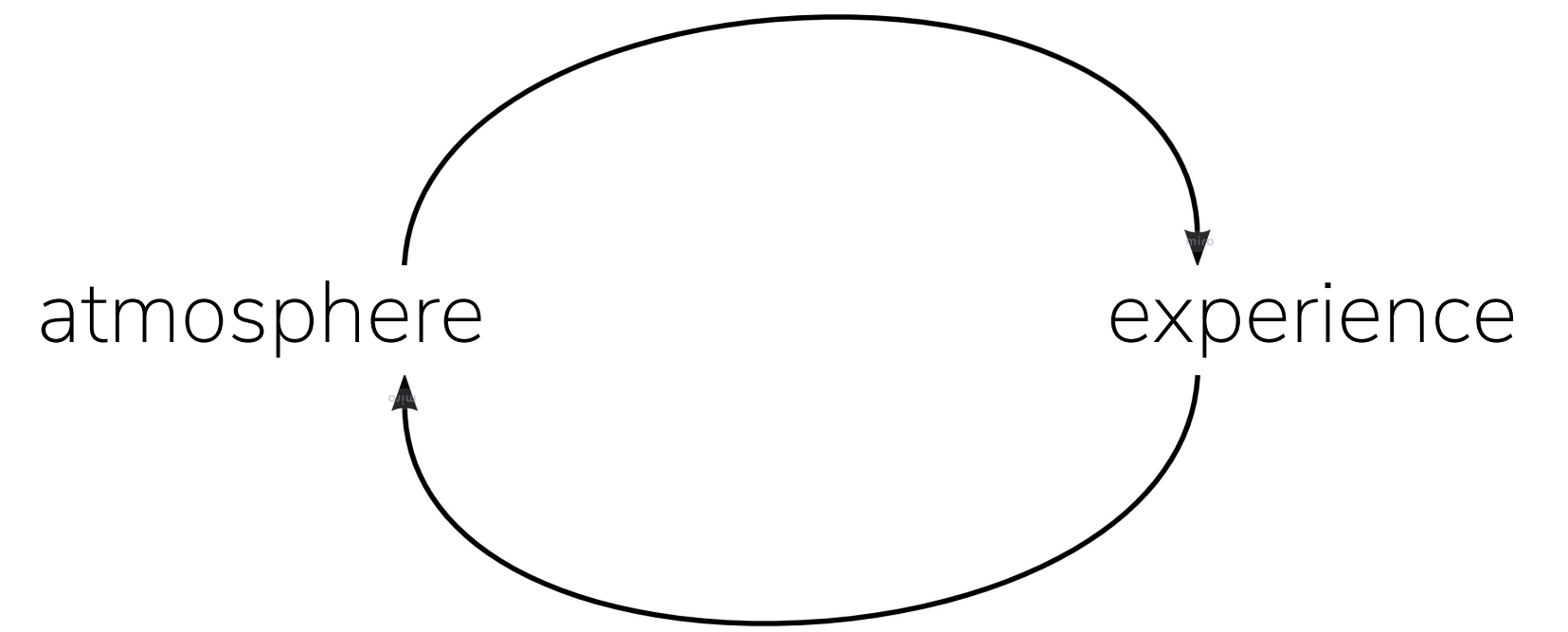
Ir. Florian Eckardt

Dr. Nicola Marzot

making the invisible visible

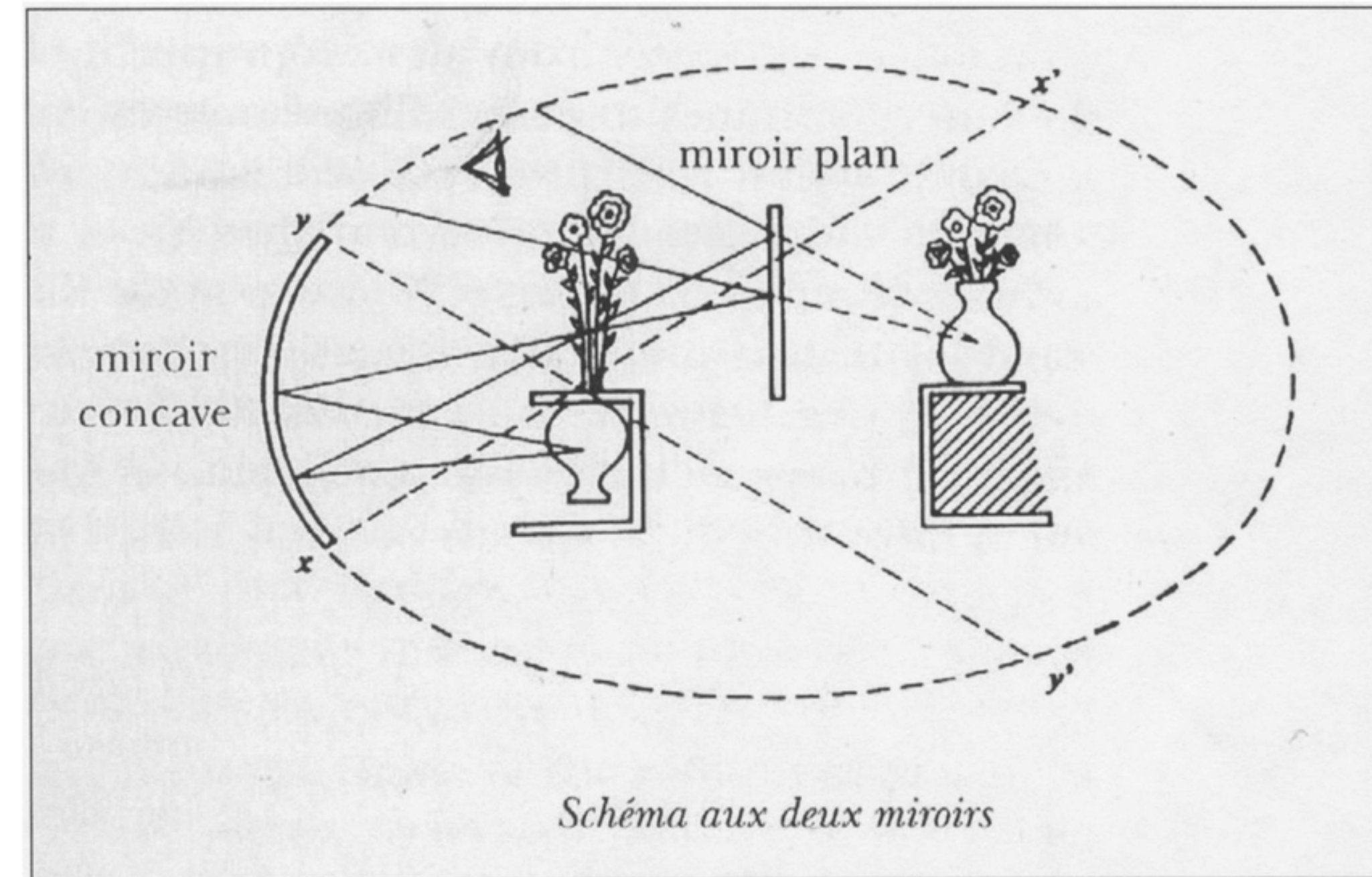
MUSIC





“We perceive atmosphere through our emotional sensibility - a form of perception that works incredibly quickly, and which we humans evidently need to help us survive”

- Peter Zumthor



“Architecture should speak
of its time and place
but yearn for **timelessness!**”

- Frank Gehry



EPHEMERALITY

The perceived world is reflected inside
our heads as patterns of **brain activity**.

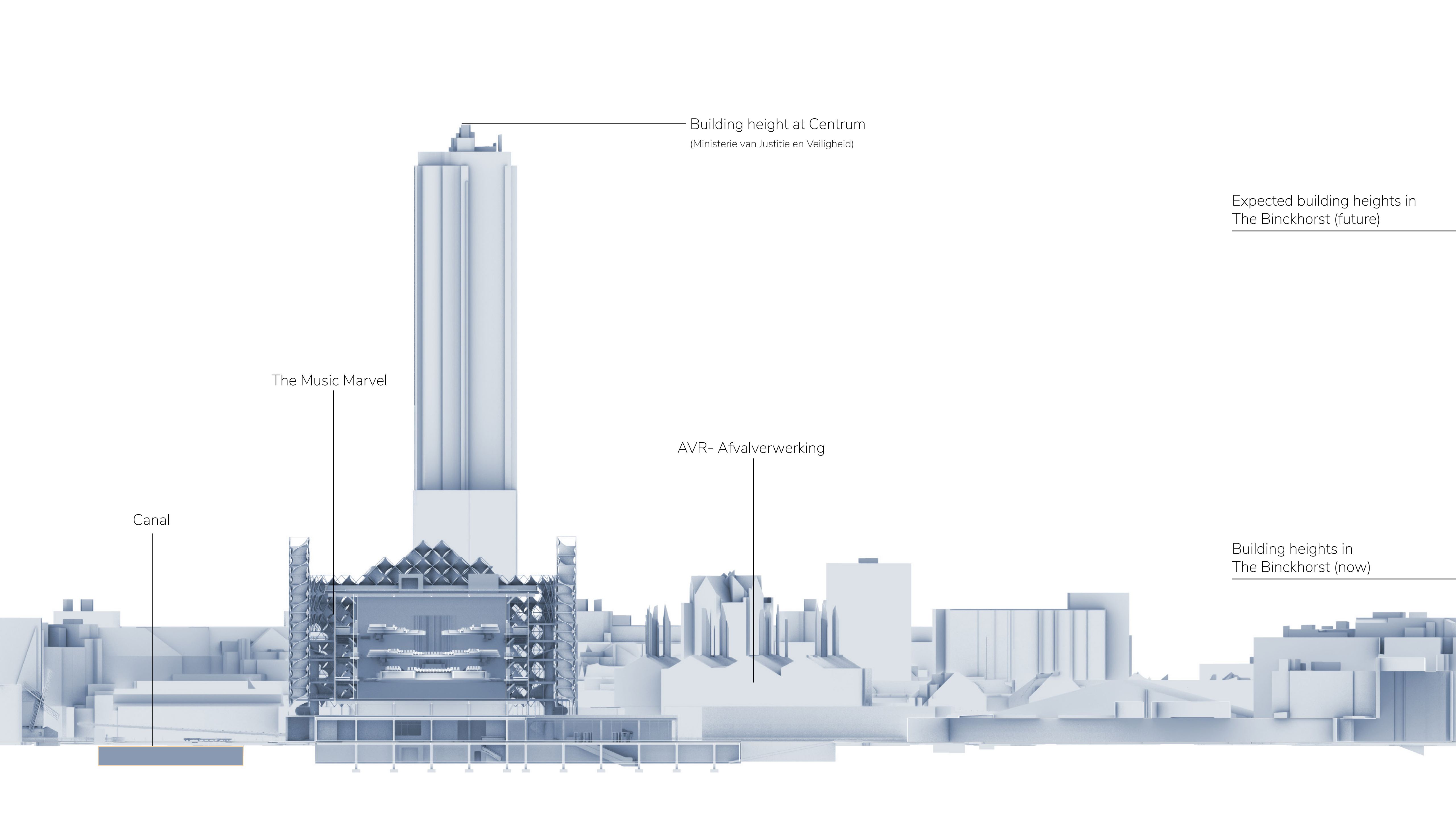
And architecture can reflect on
that activity!



AWARENESS







Building height at Centrum
(Ministerie van Justitie en Veiligheid)

Expected building heights in
The Binckhorst (future)

The Music Marvel

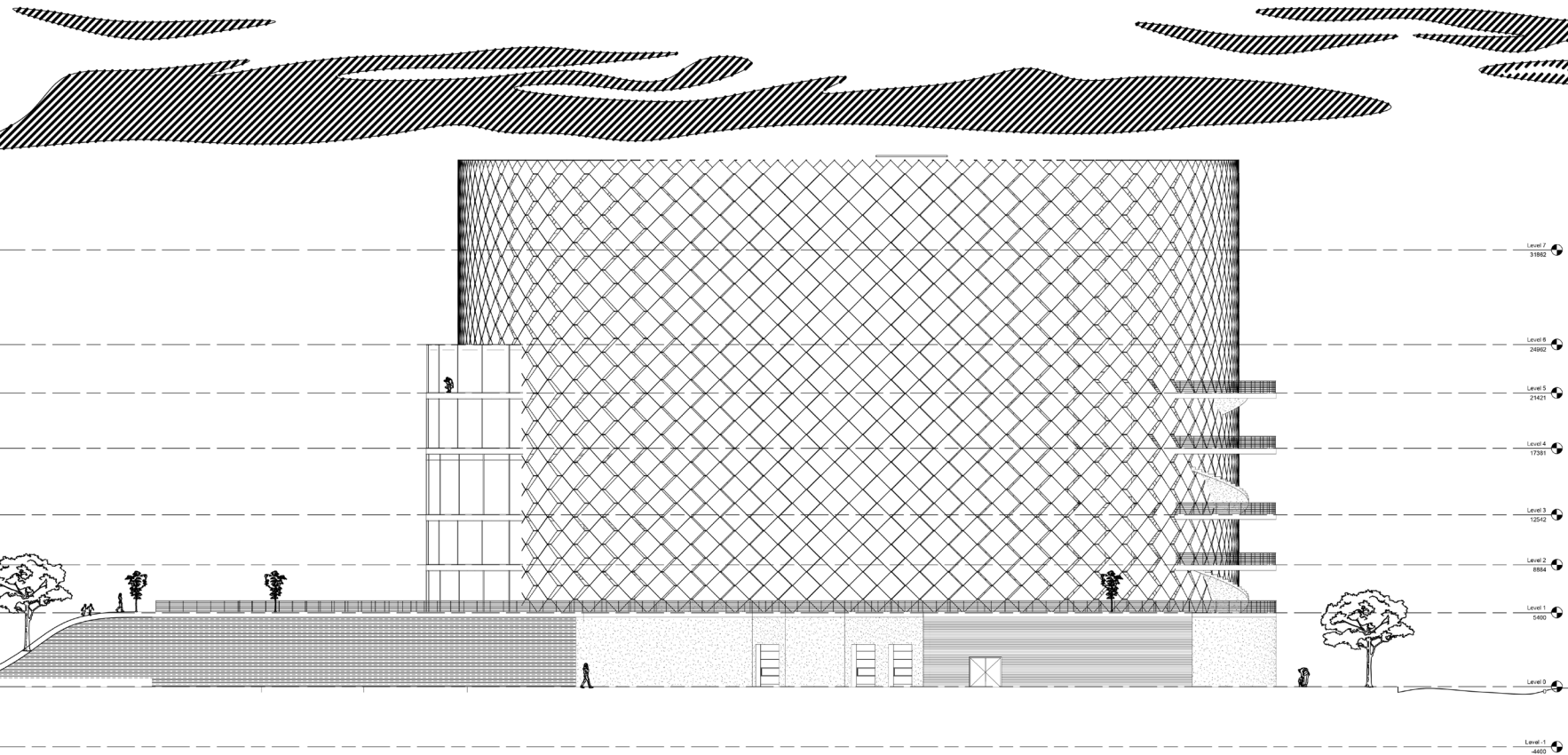
AVR- Afvalverwerking

Canal

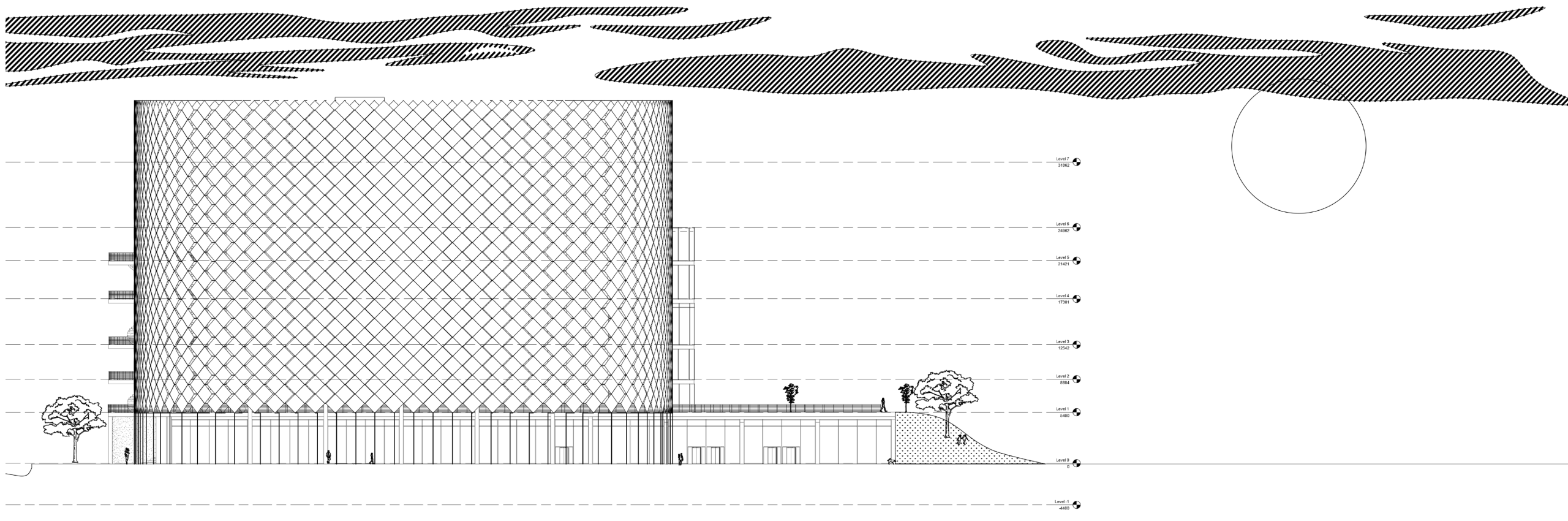
Building heights in
The Binckhorst (now)

ELEVATIONS

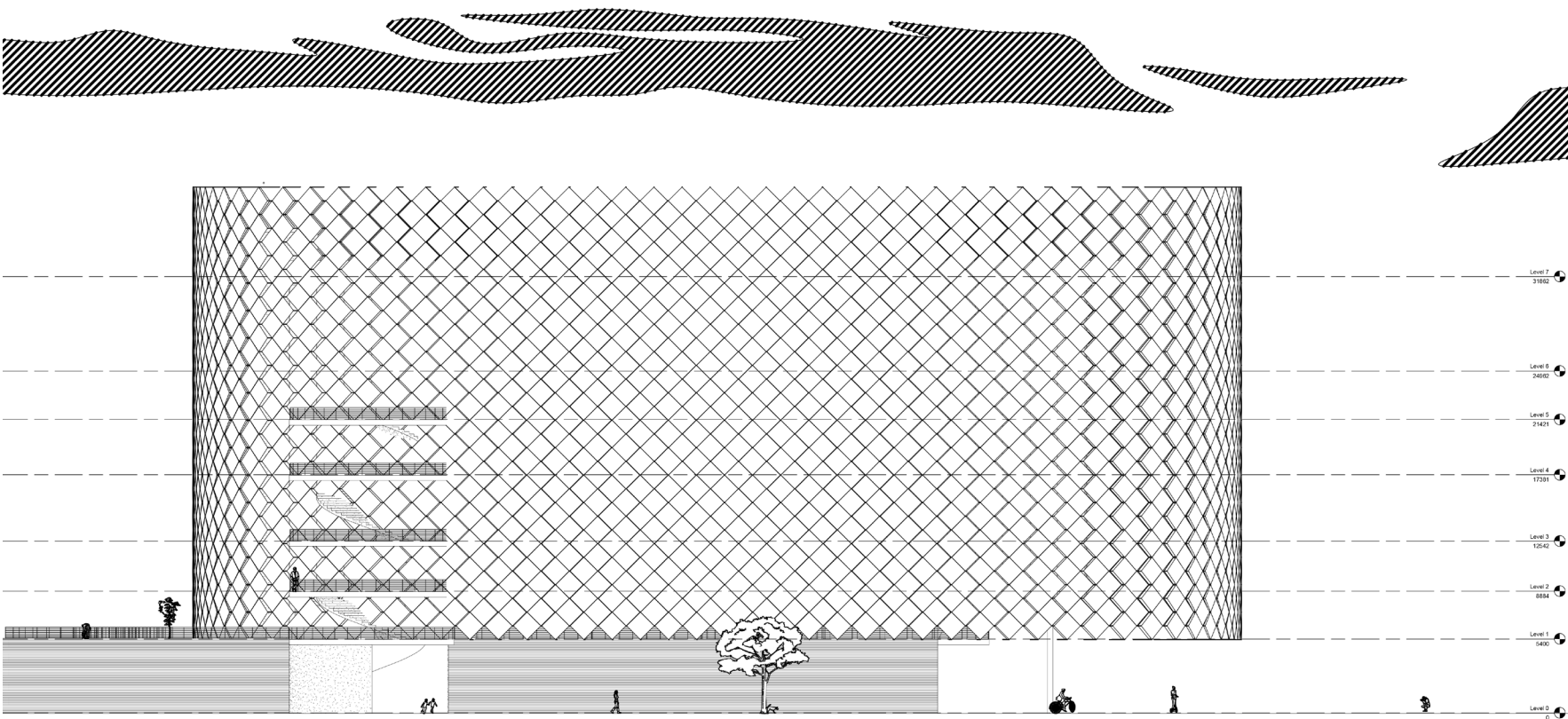
North-West



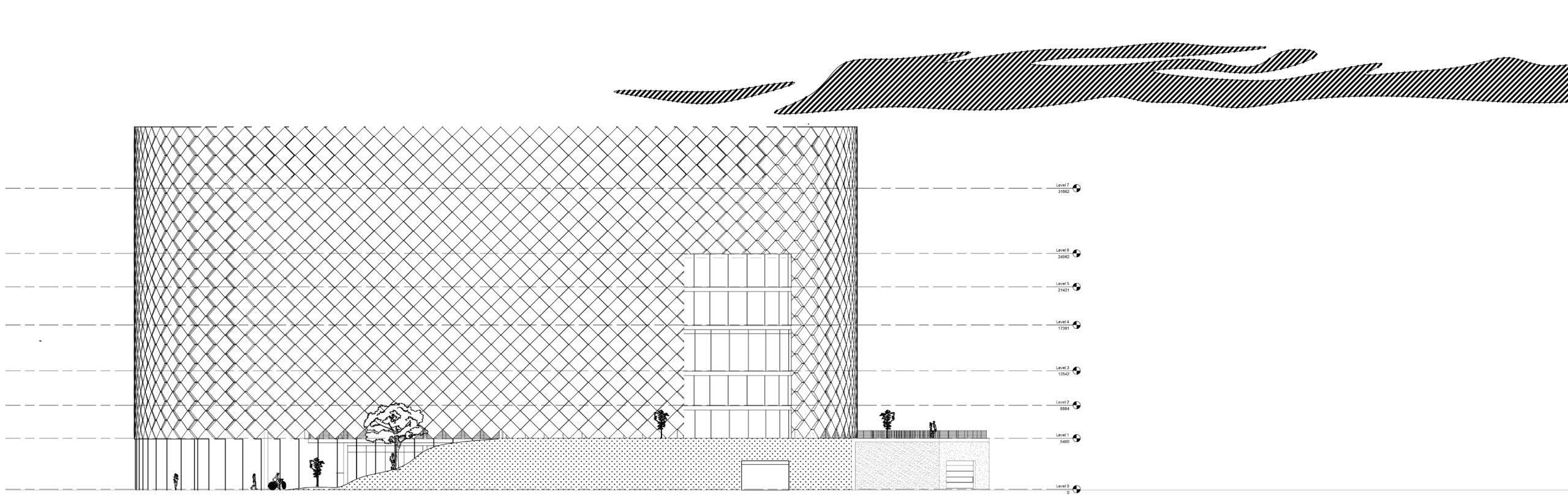
South-East



South-West

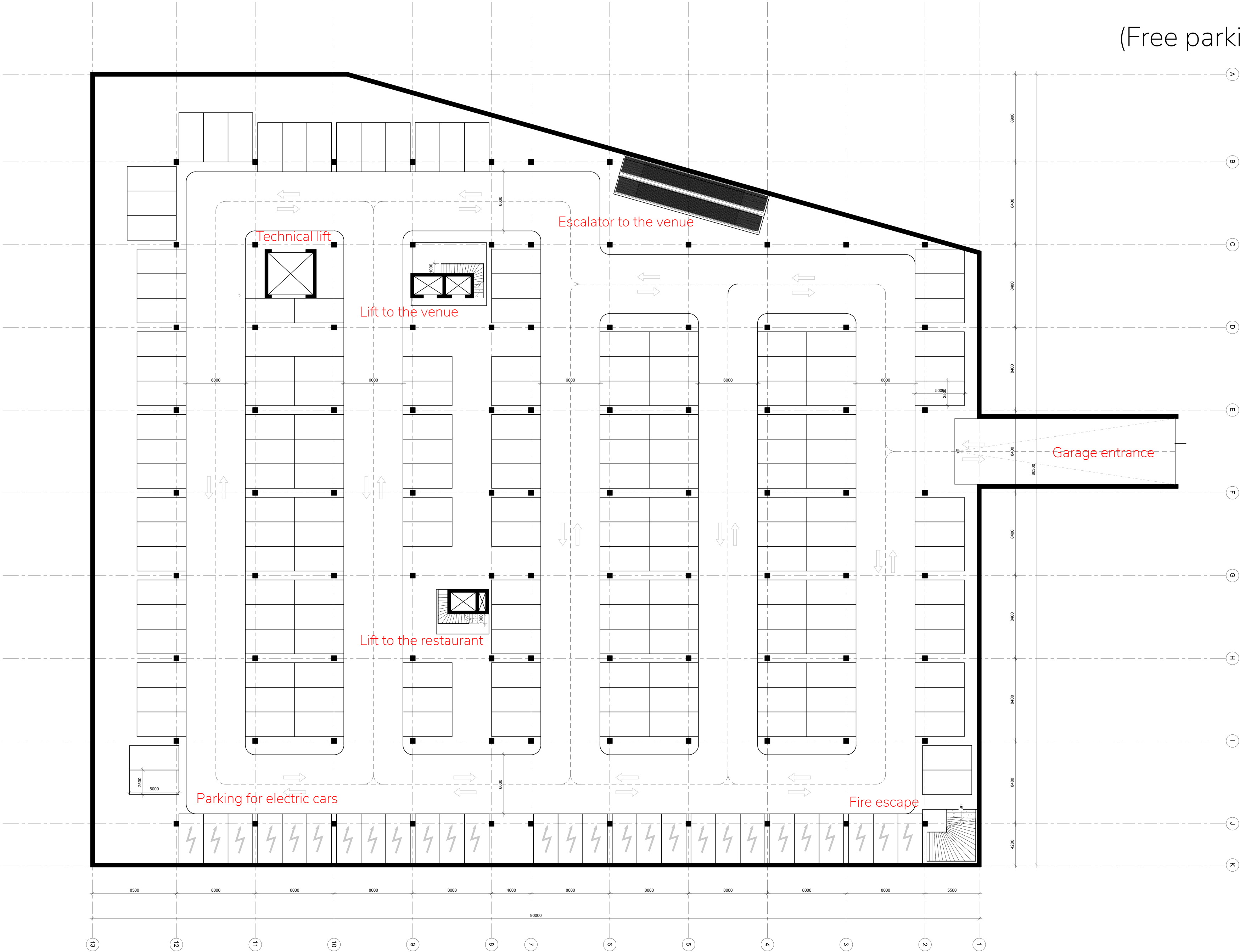


North-East

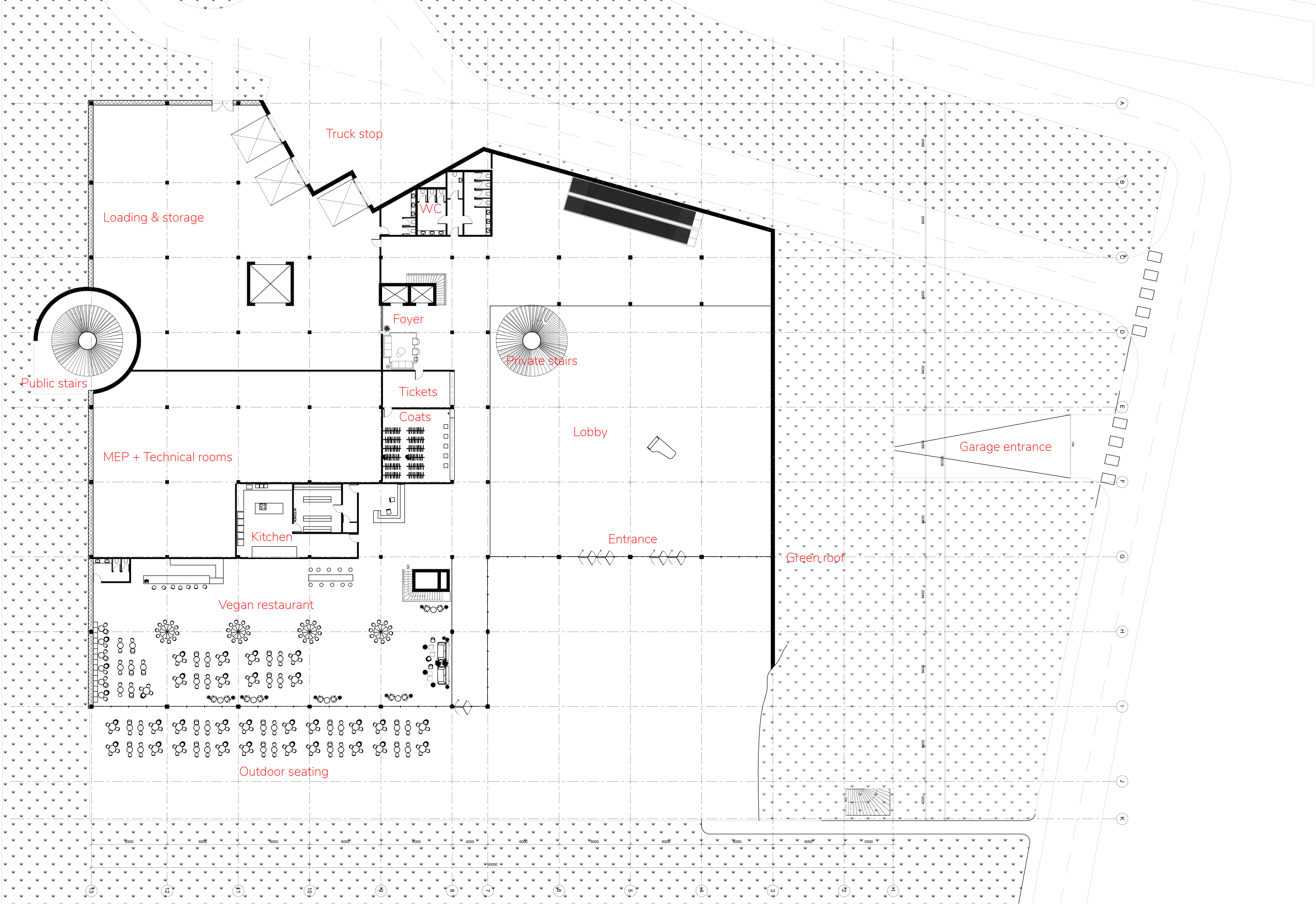


LEVEL -1

(Free parking for electric cars)



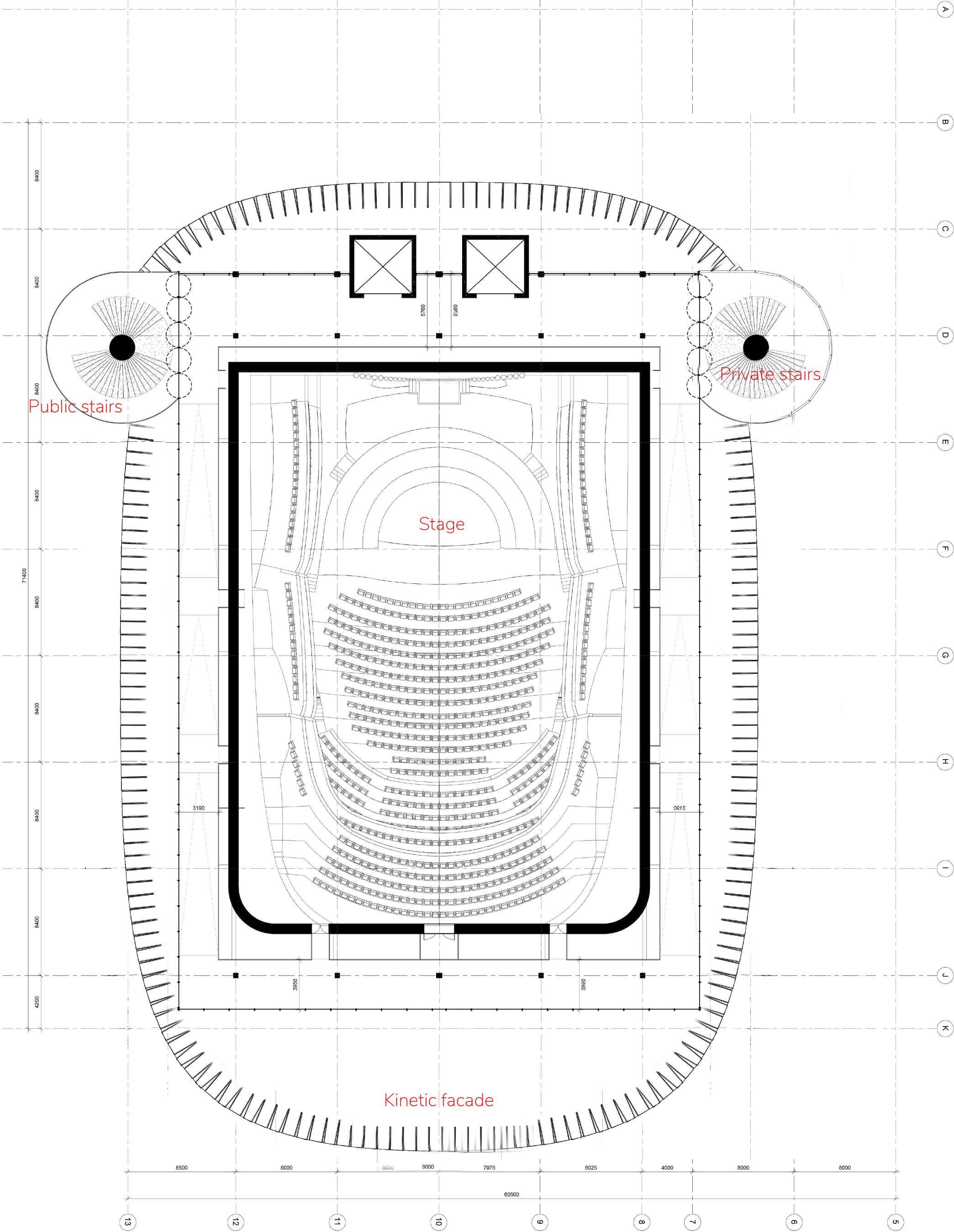
LEVEL 0



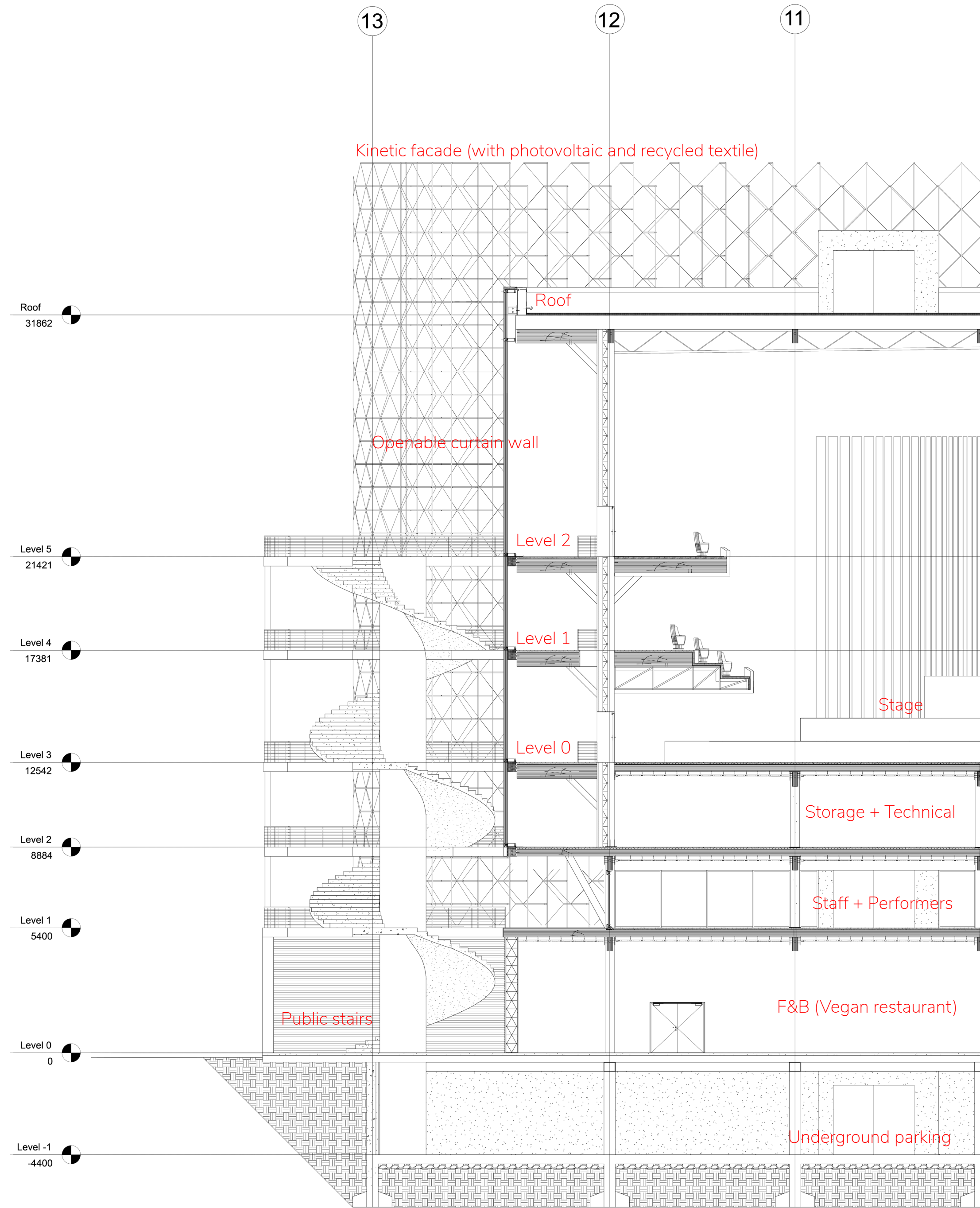
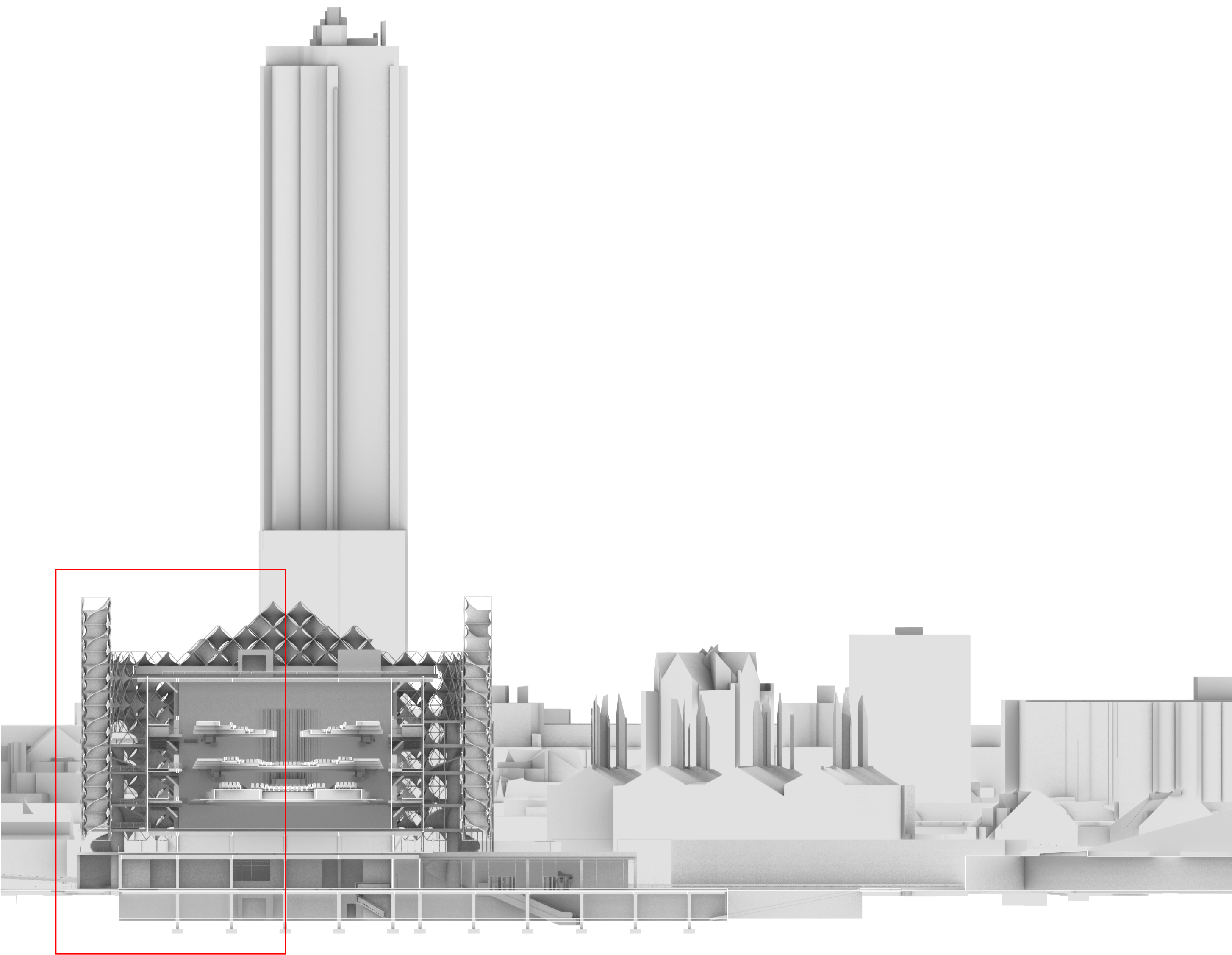
LEVEL 4

1380 seats

2 balcony levels

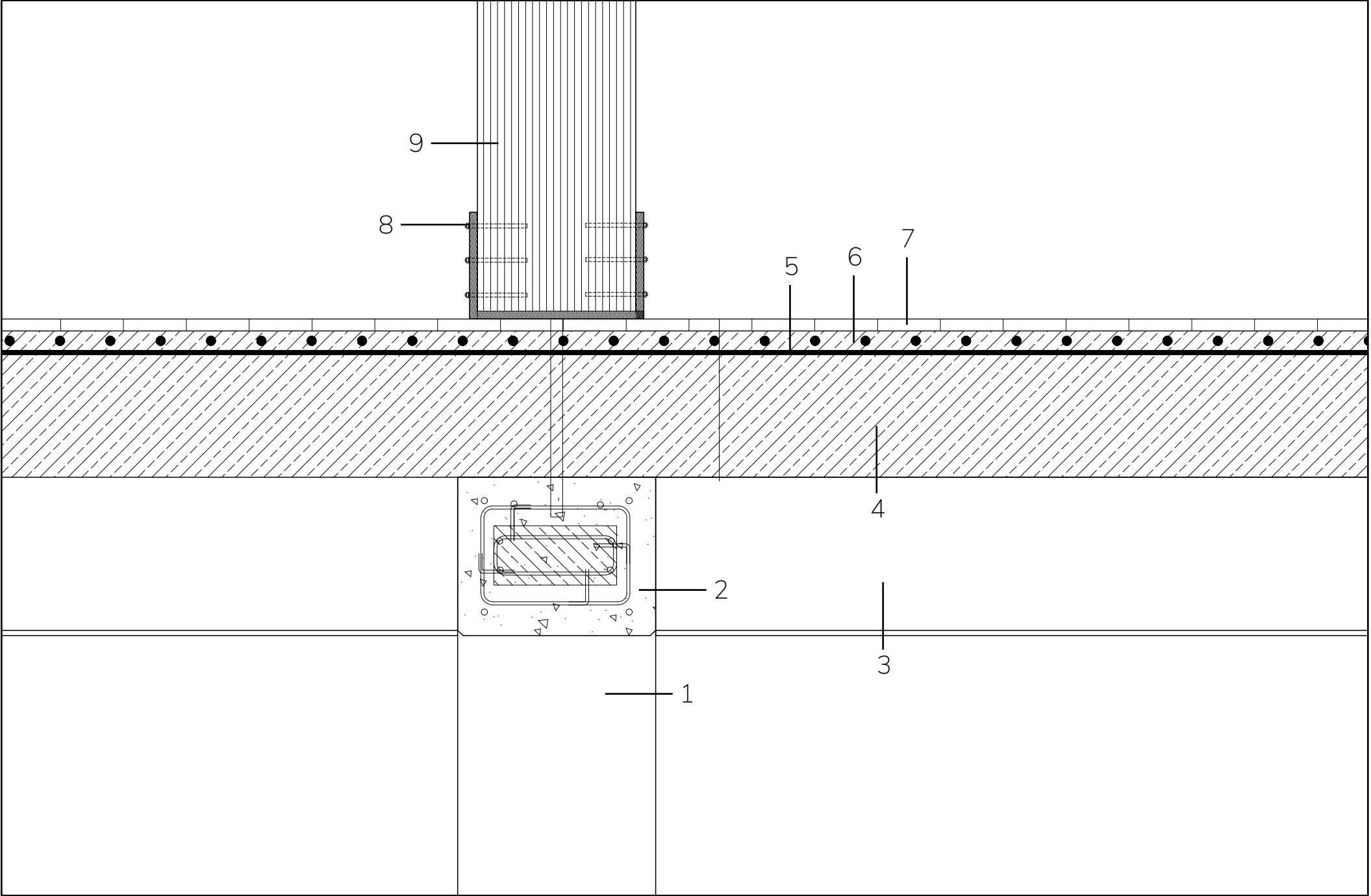


STRUCTURAL DETAILS: SECTION

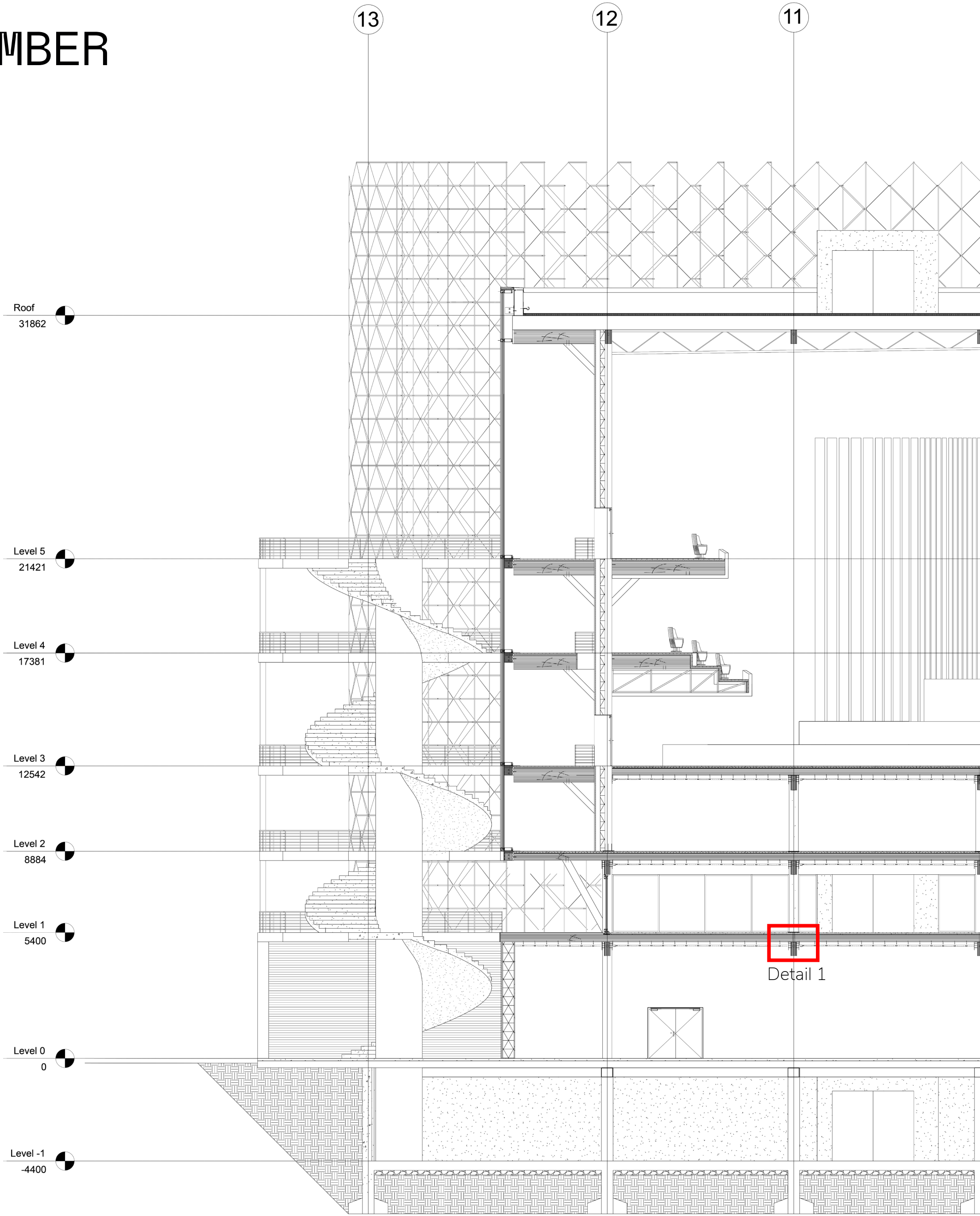


STRUCTURAL DETAILS: CONCRETE TO TIMBER

Detail 1

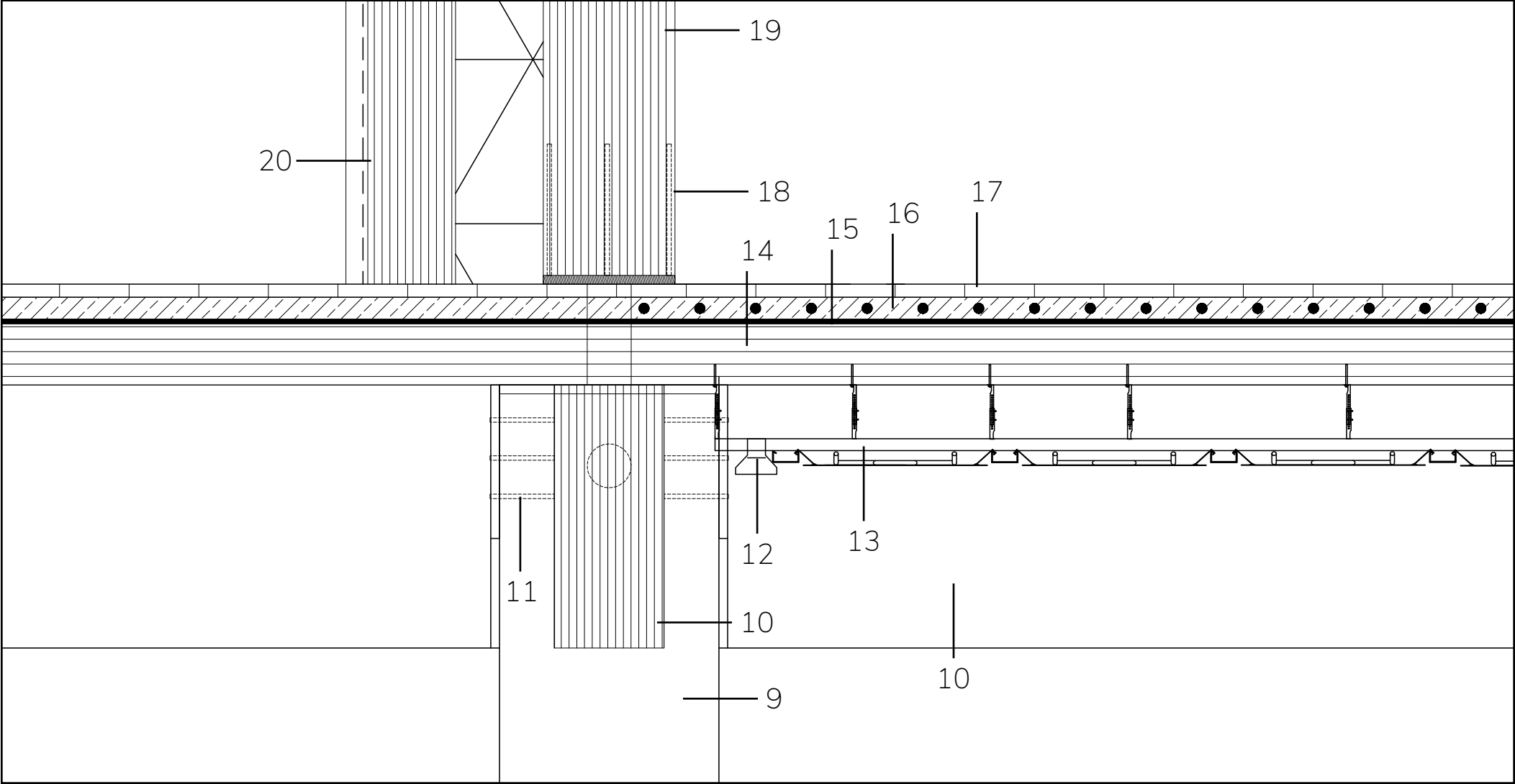


- 1 Concrete column 500mm x 500mm
- 2 Concrete beam
- 3 Main rebar
- 4 Concrete slab 400mm
- 5 Vapor and acoustic barrier
- 6 Cement screed with floor heating pipes 80mm
- 7 Timber laminated floor finish 10mm
- 8 Post base anchor plate drilled into concrete column
- 9 GLT column 400mm x 400mm (with fire retardant coating)

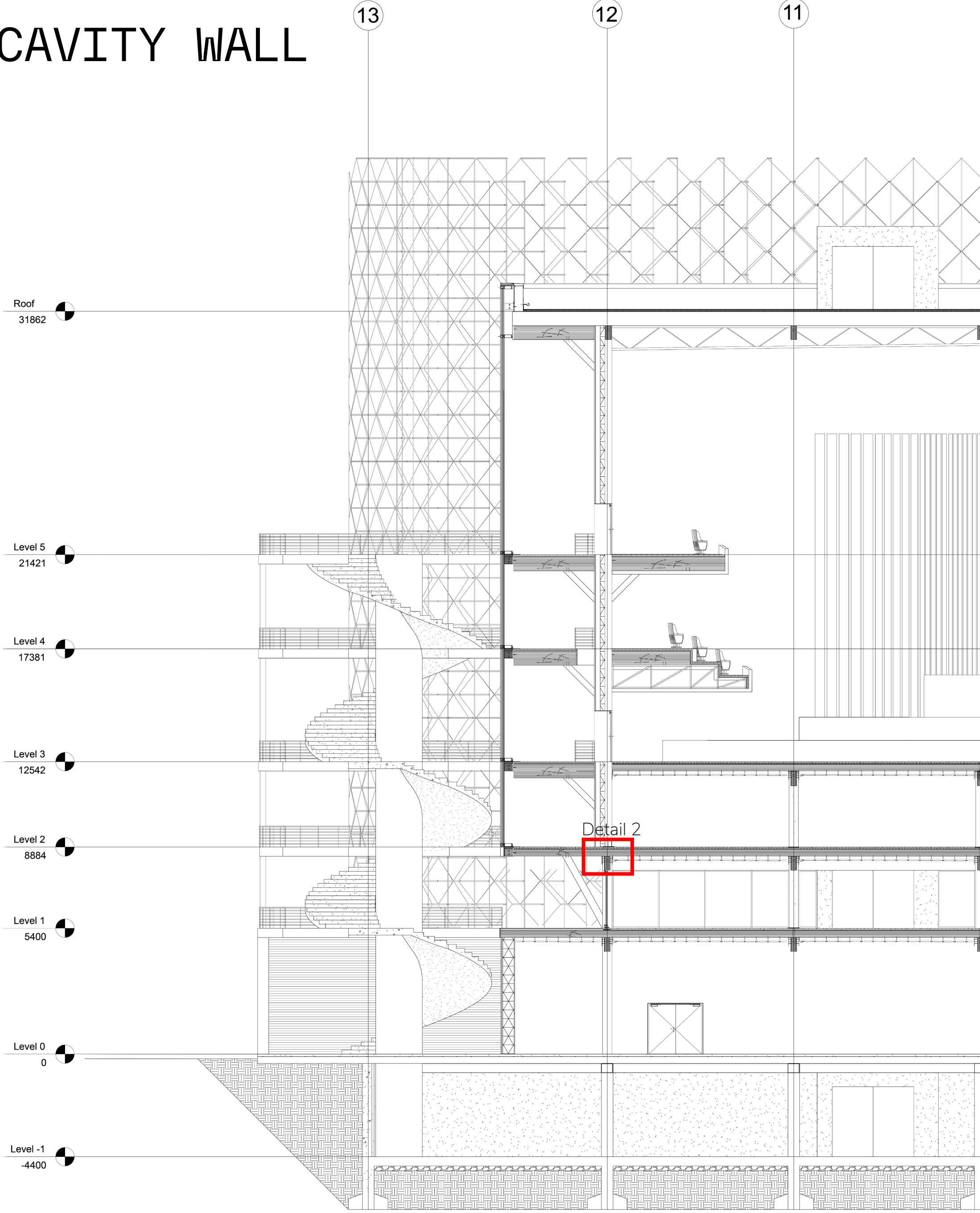


STRUCTURAL DETAILS: GLT COLUMN TO CAVITY WALL

Detail 2

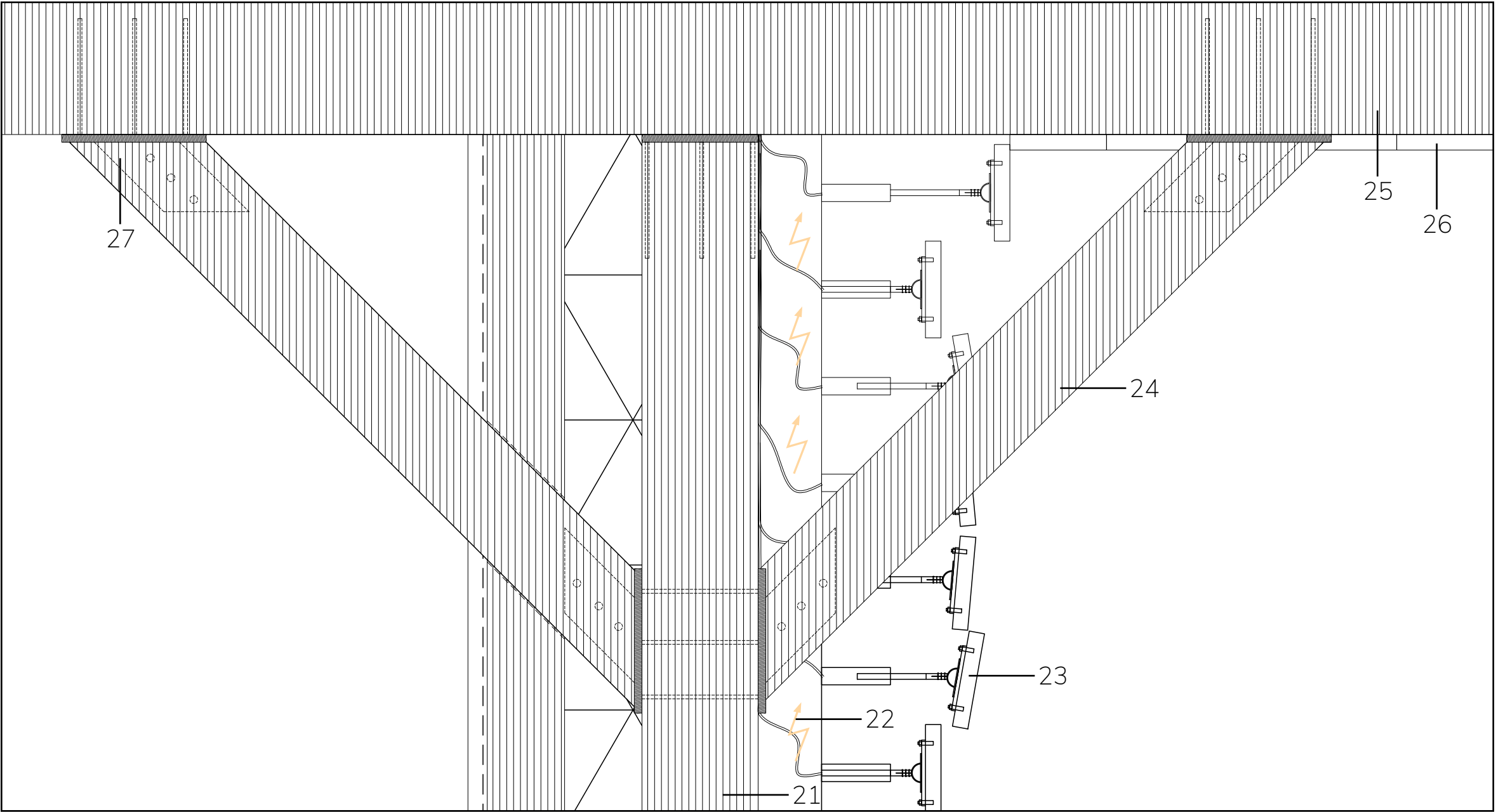


- 9 GLT column 500mm x 500mm (with fire retardant coating)
- 10 GLT beam 300mm x 600mm (with fire retardant coating)
- 11 Steel seismic girder hanger with engineered bolts
- 12 Embedded spotlight
- 13 Lower ceiling with contact cooling system with water pipe and gypsum board finish
- 14 CLT floor 200mm
- 15 Vapor and acoustic barrier
- 16 Cement screed with floor heating pipes 80mm
- 17 Timber laminated floor finish 10 mm
- 18 Steel strap with engineered selftapping screws
- 19 Cavity load-bearing wall: 200mm GLT wall, 200mm acoustic insulation fiber infill, 300mm GLT wall
- 20 Timber laminated wall finish 10mm

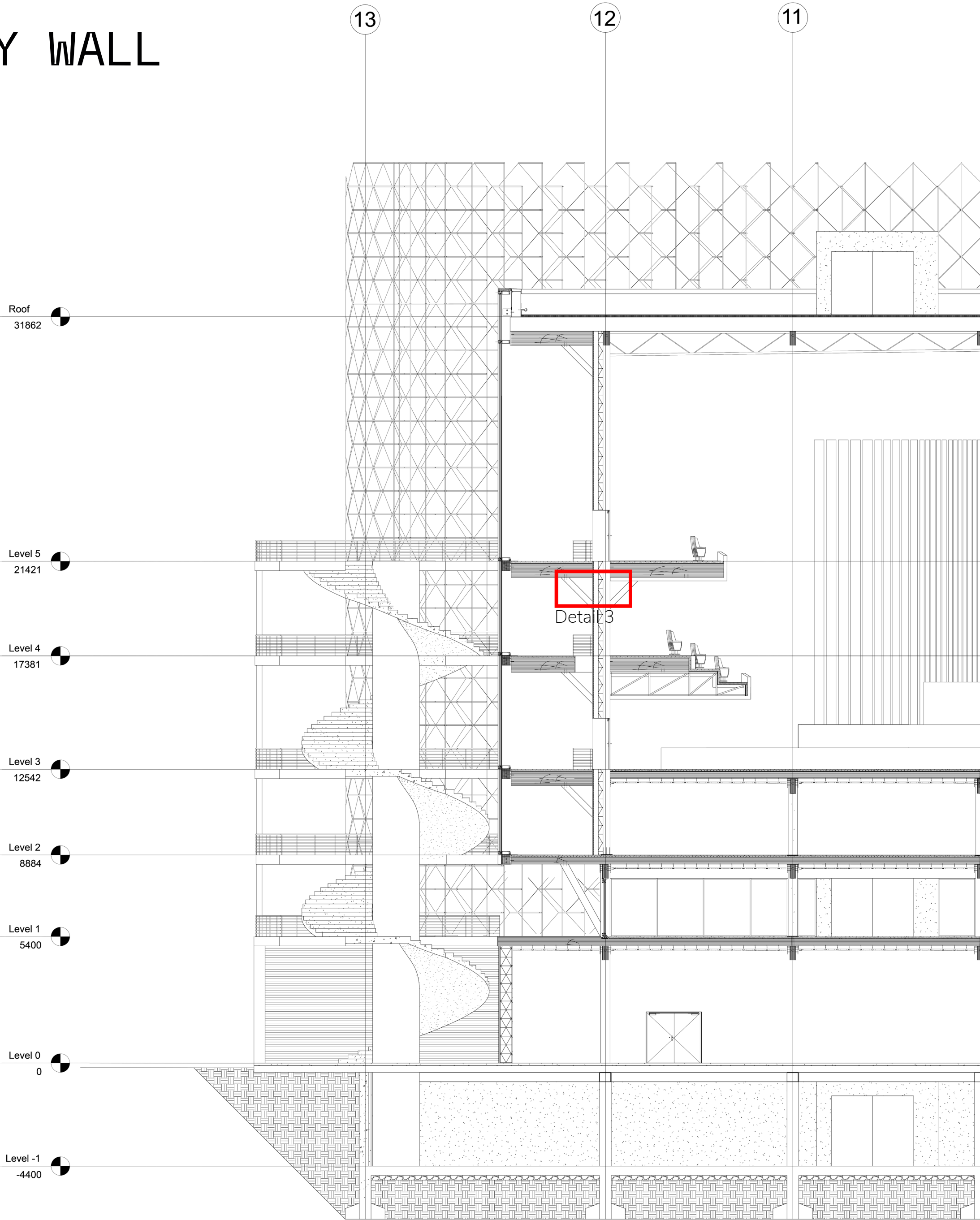


STRUCTURAL DETAILS: TIMBER ± CAVITY WALL

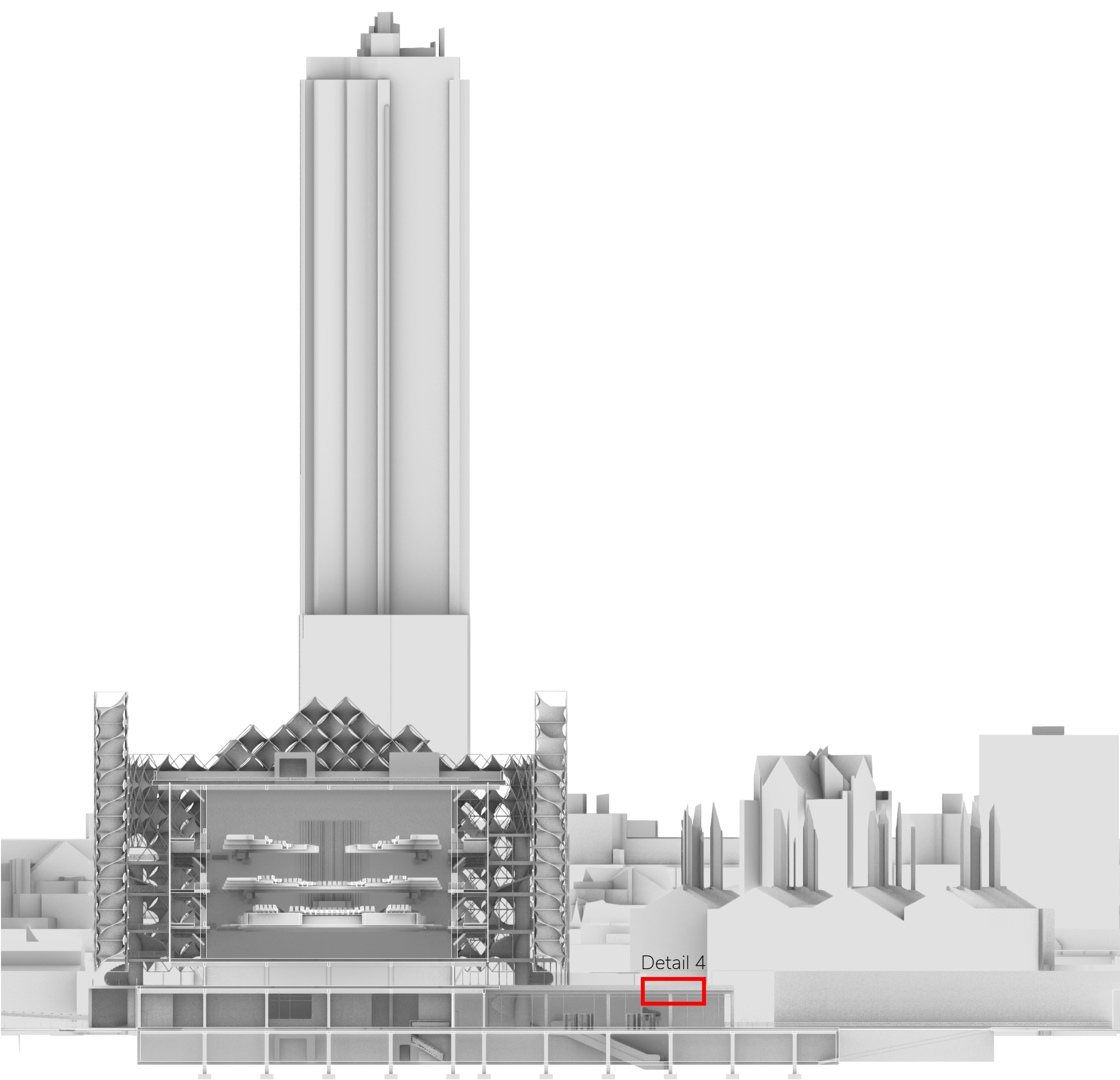
Detail 3



- 21 Cavity load-bearing wall: 200mm GLT wall, 200mm acoustic insulation fiber infill, 300mm GLT wall
- 22 Kinetic wall: Electrical instalations 150mm
- 23 Kinetic wall: Protruded CLT panel 200mm x 200mm x 24mm
- 24 GLT strut 300mm x 300mm
- 25 GLT beam 600mm x 300mm
- 26 Timber laminated surface finish 20mm
- 27 Steel strap with egineered selftapping screws

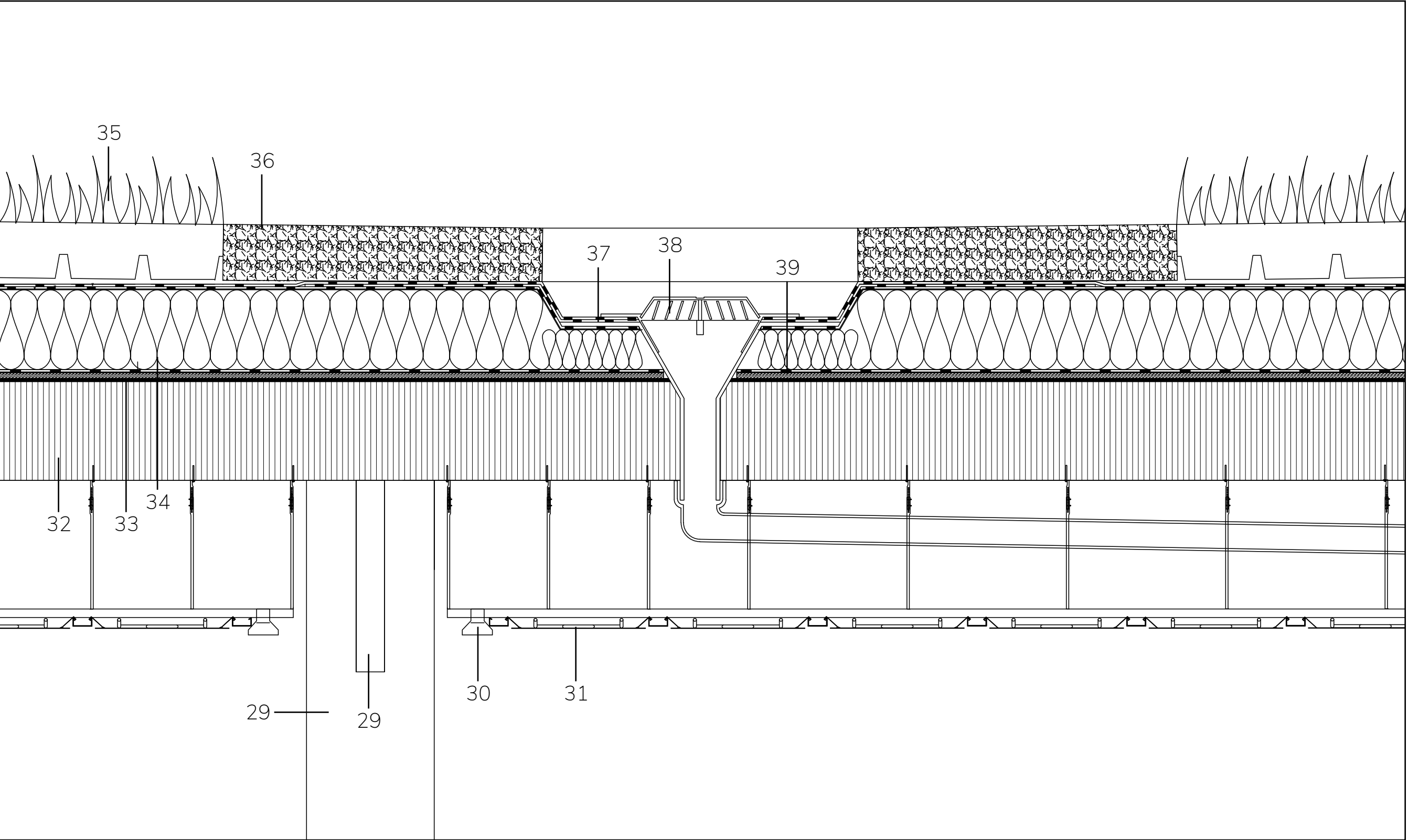


STRUCTURAL DETAILS: GREEN ROOF ± RAIN COLLECTION



Detail 4

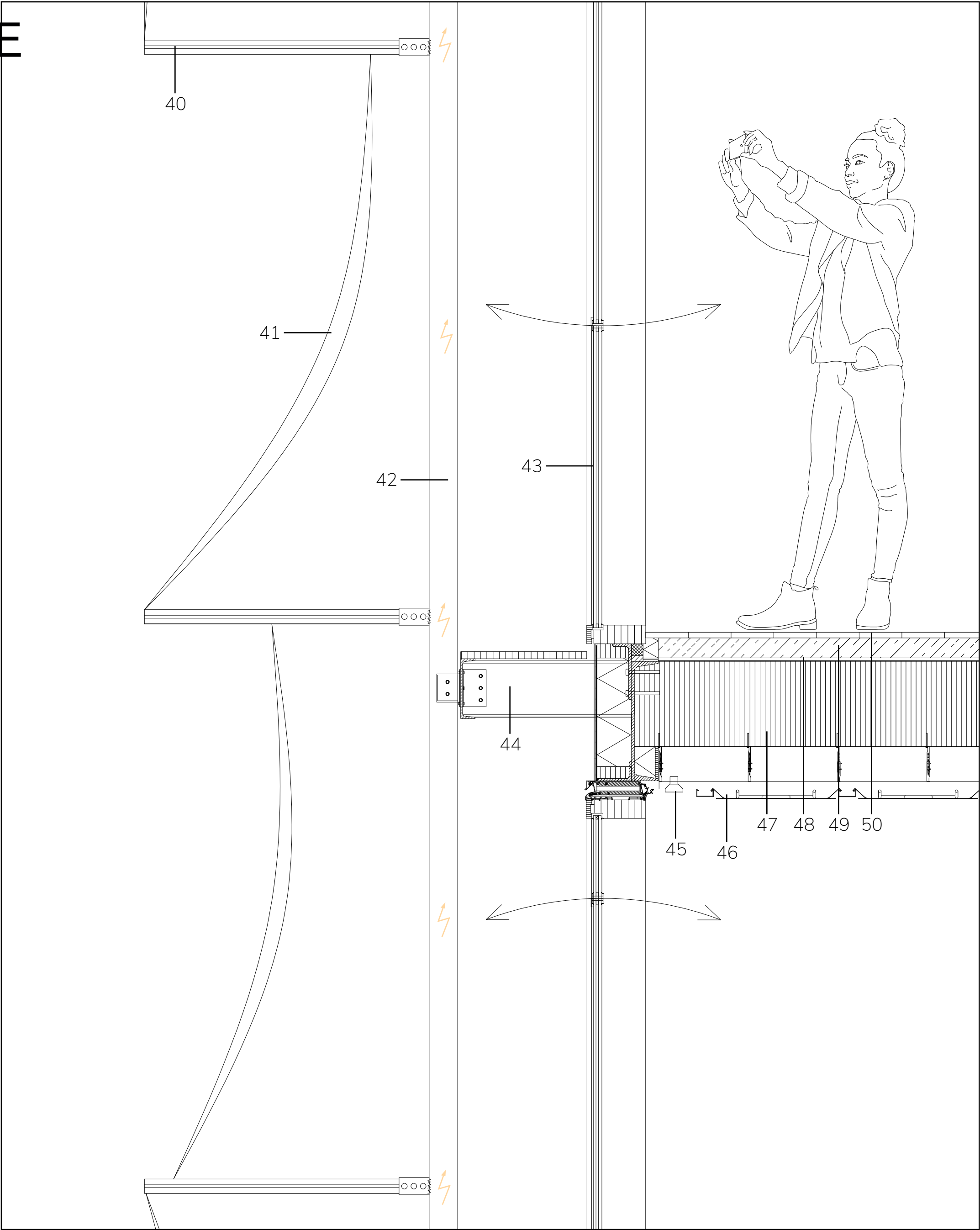
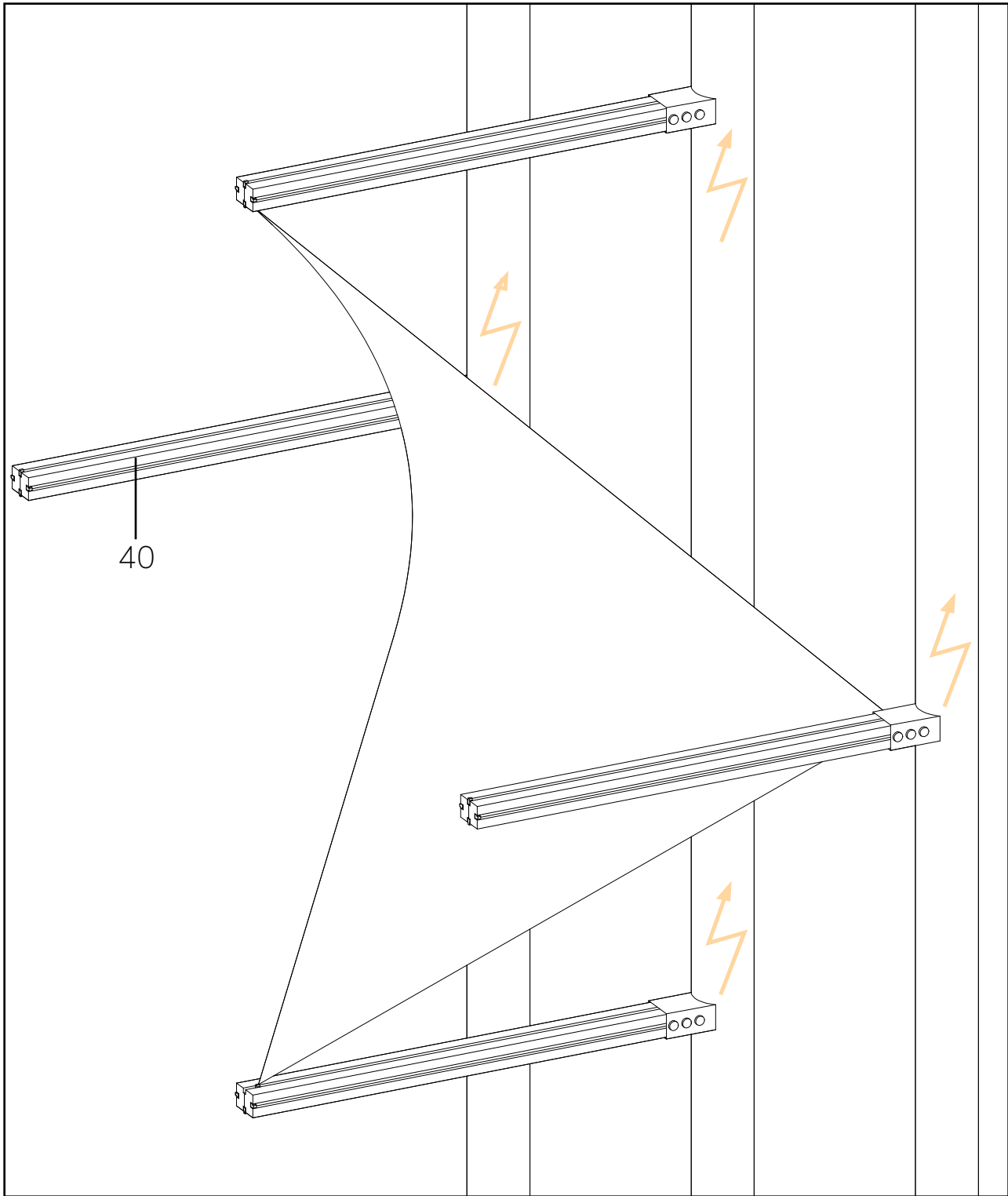
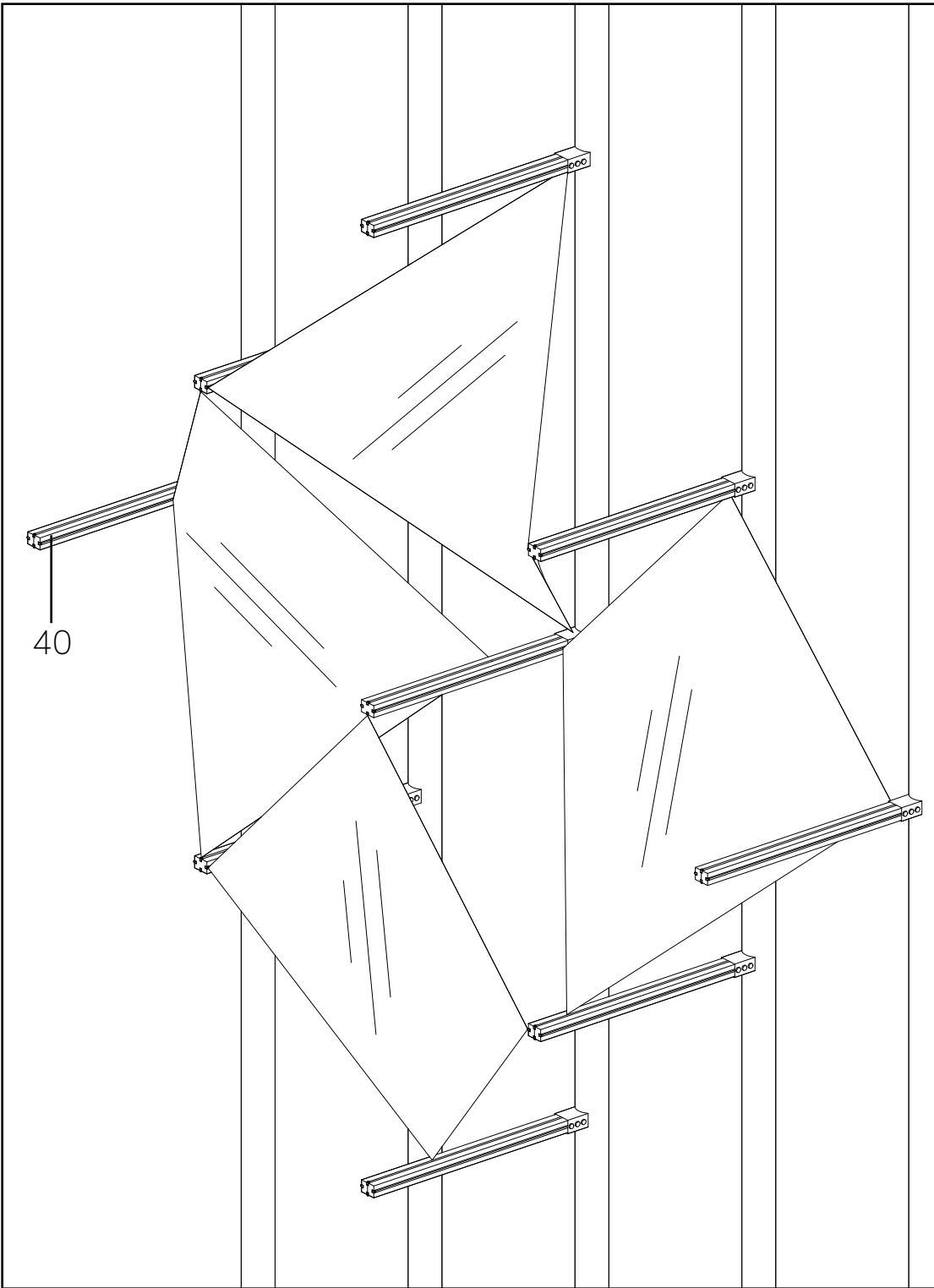
Detail 4



- 28 GLT beam 400mm x 400mm
- 29 Steel truss 40m span, 770mm
- 30 Embedded spotlight
- 31 Lower ceiling with contact cooling system with water pipe and gypsum board finish
- 32 CLT floor 400mm
- 33 Vapor and acoustic barrier
- 33 Thermoal insulation 300mm
- 35 Canopia Jardibac - vegetation panels
- 36 Sterile (soil filter) zone
- 37 Aluminum coating
- 38 Pluvia system
- 39 Water insulation

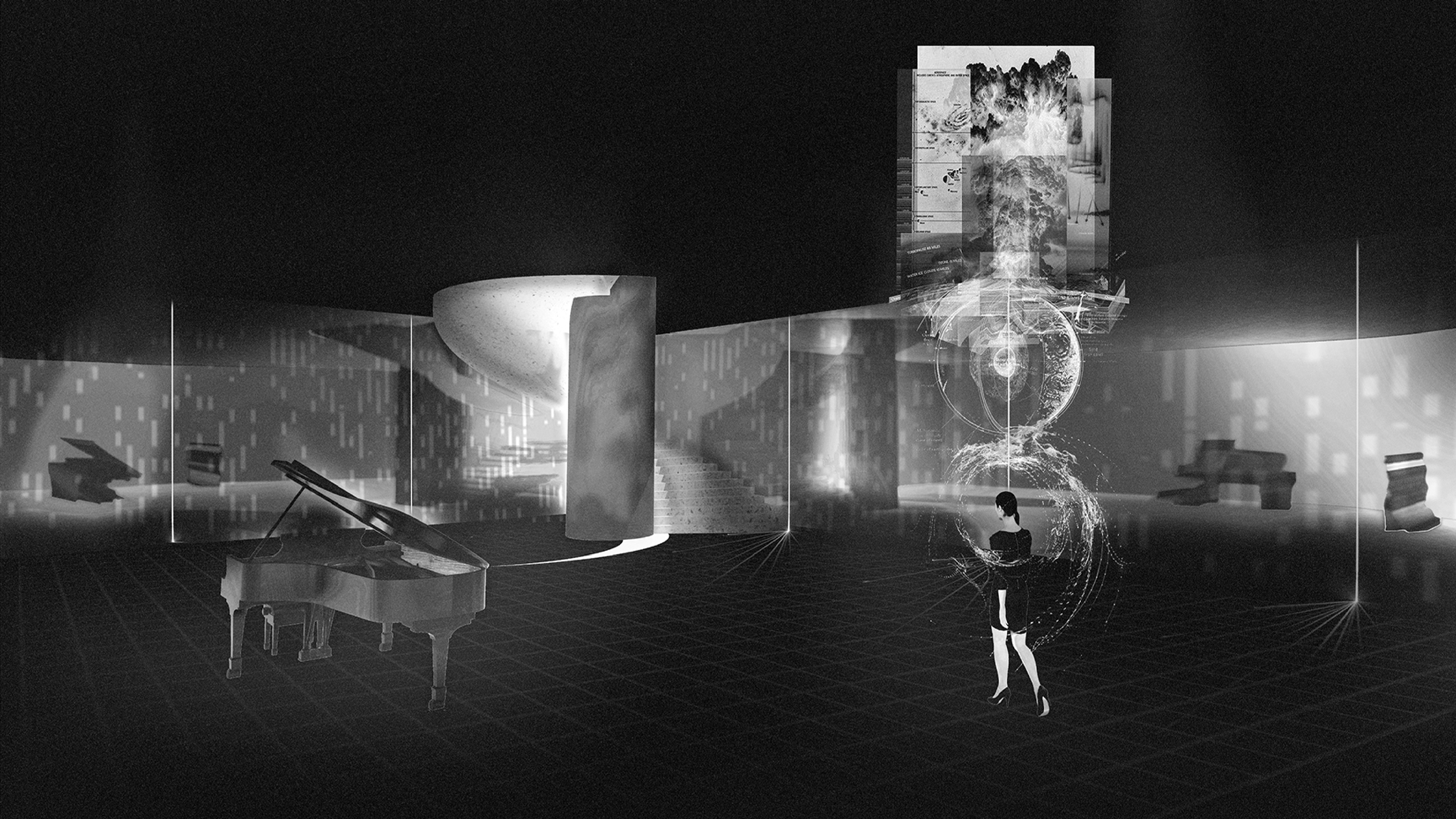
STRUCTURAL DETAILS: KINETIC FACADE

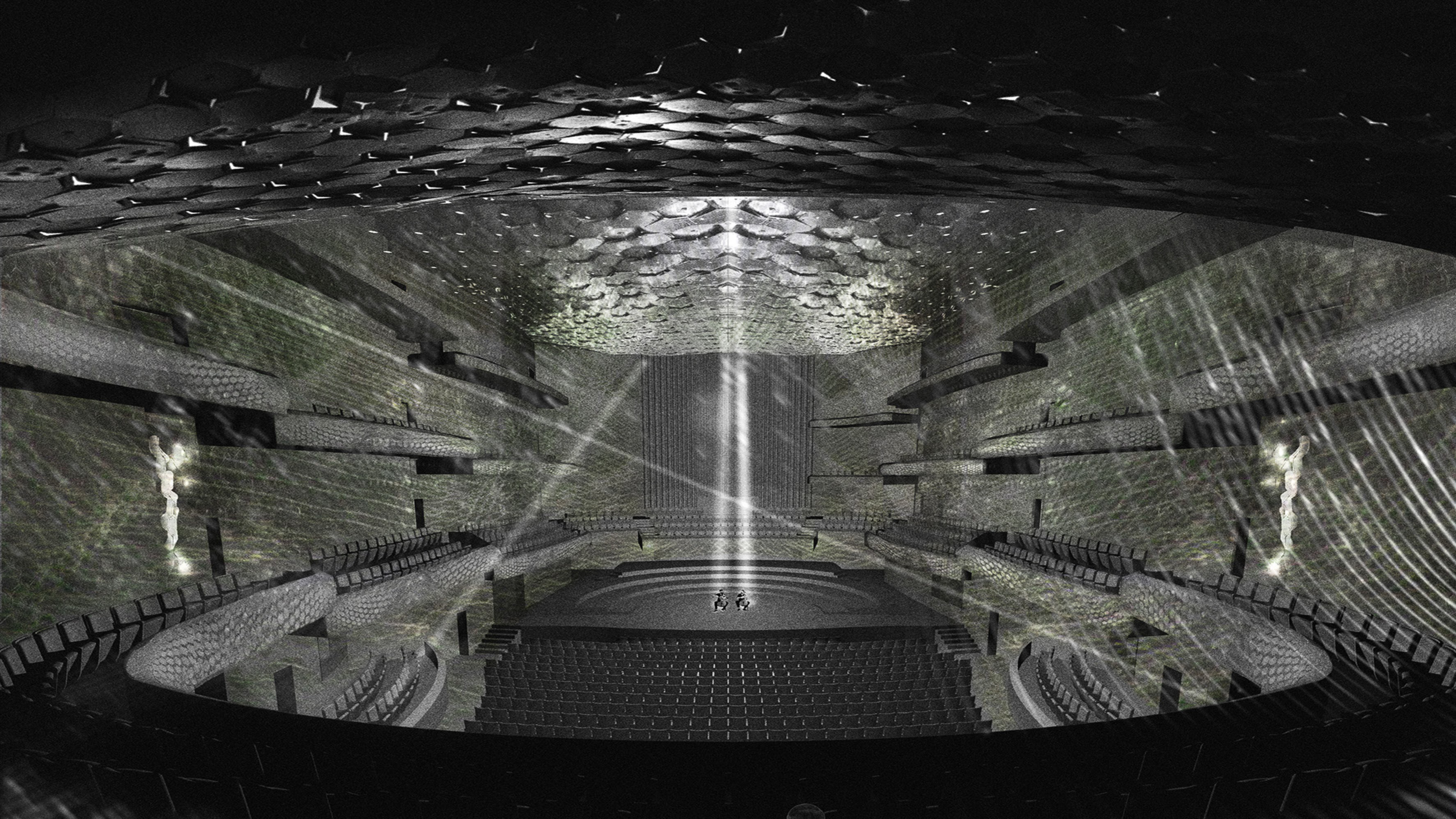
Detail 5 (a, b, c)

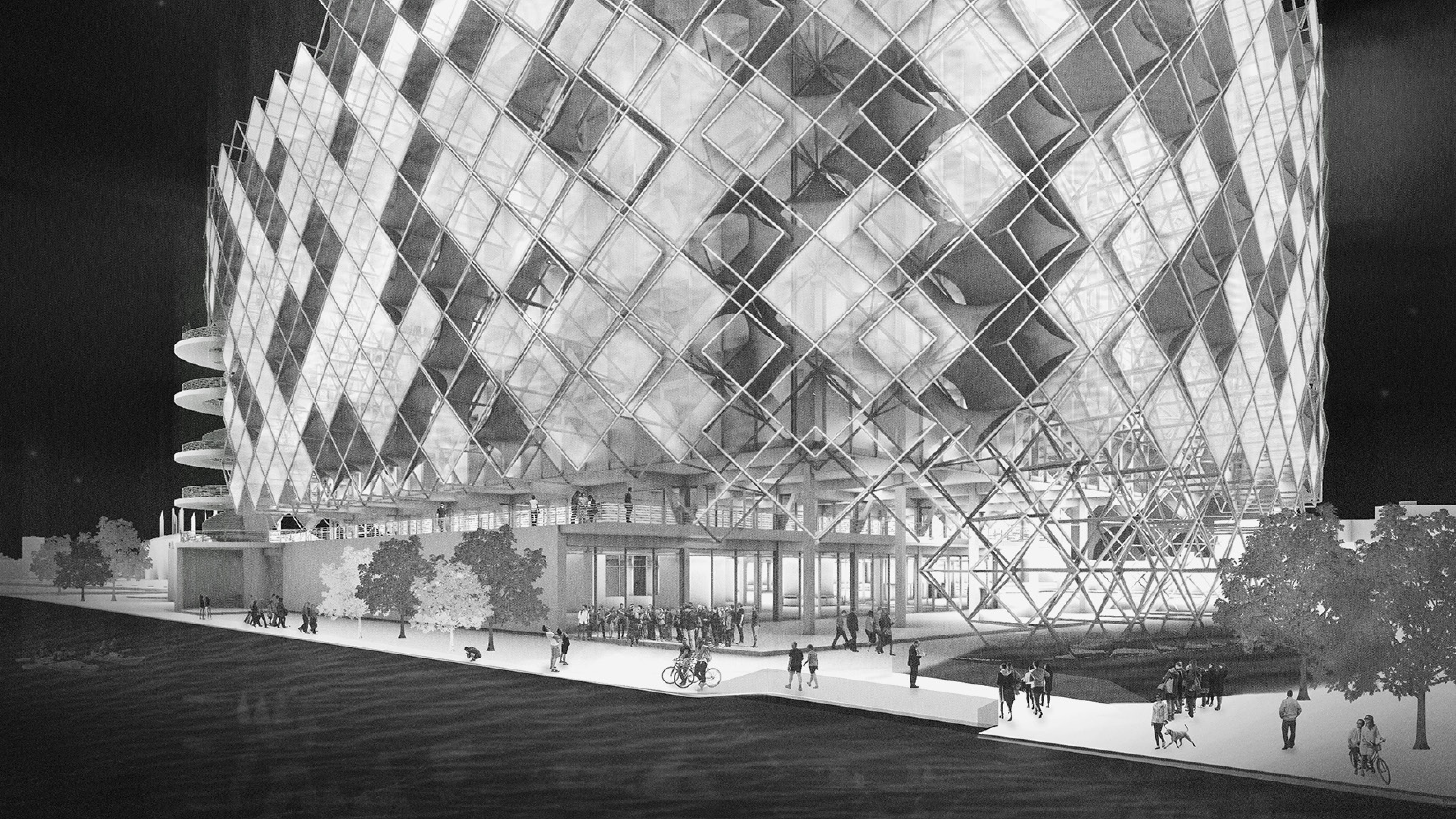


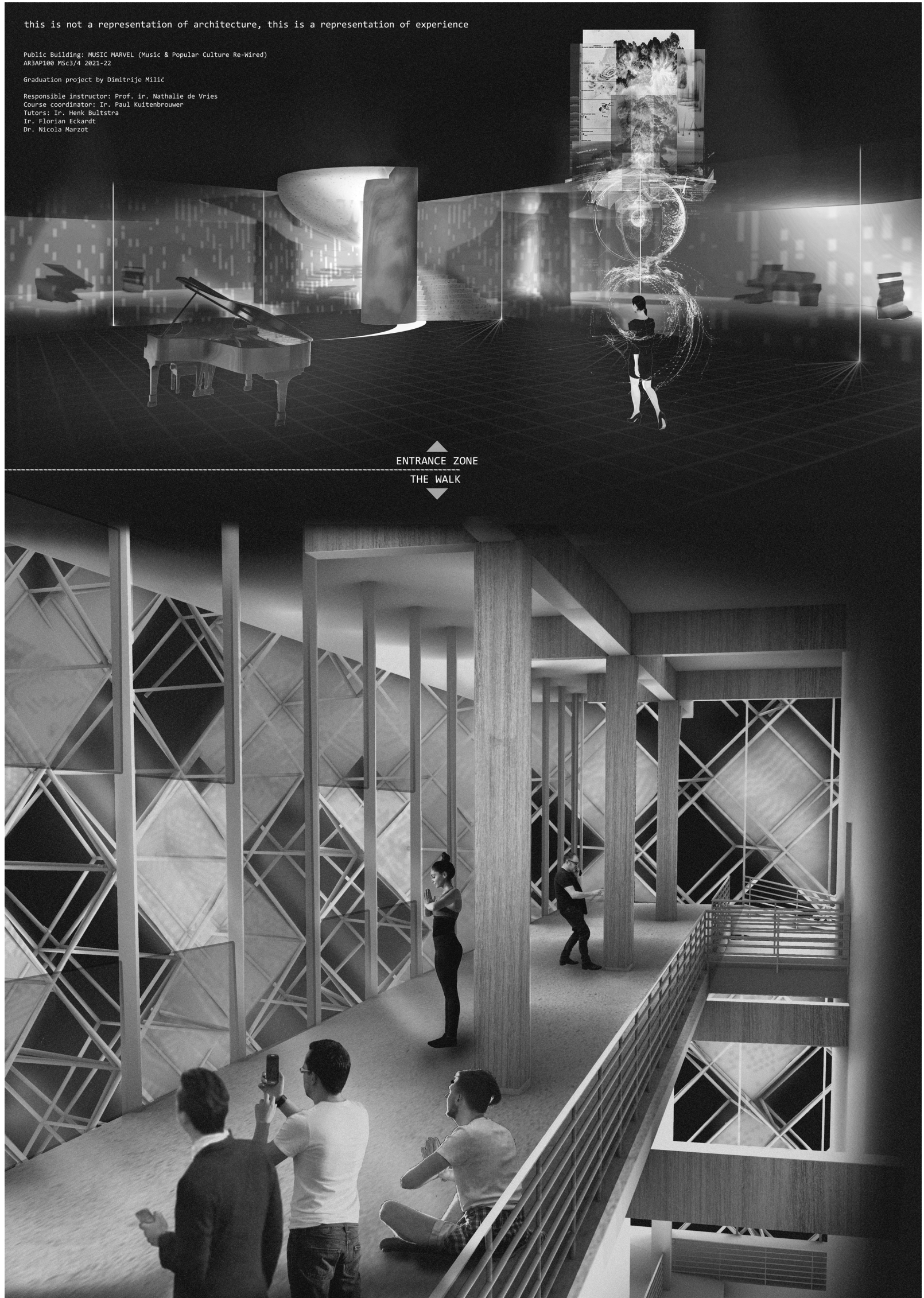
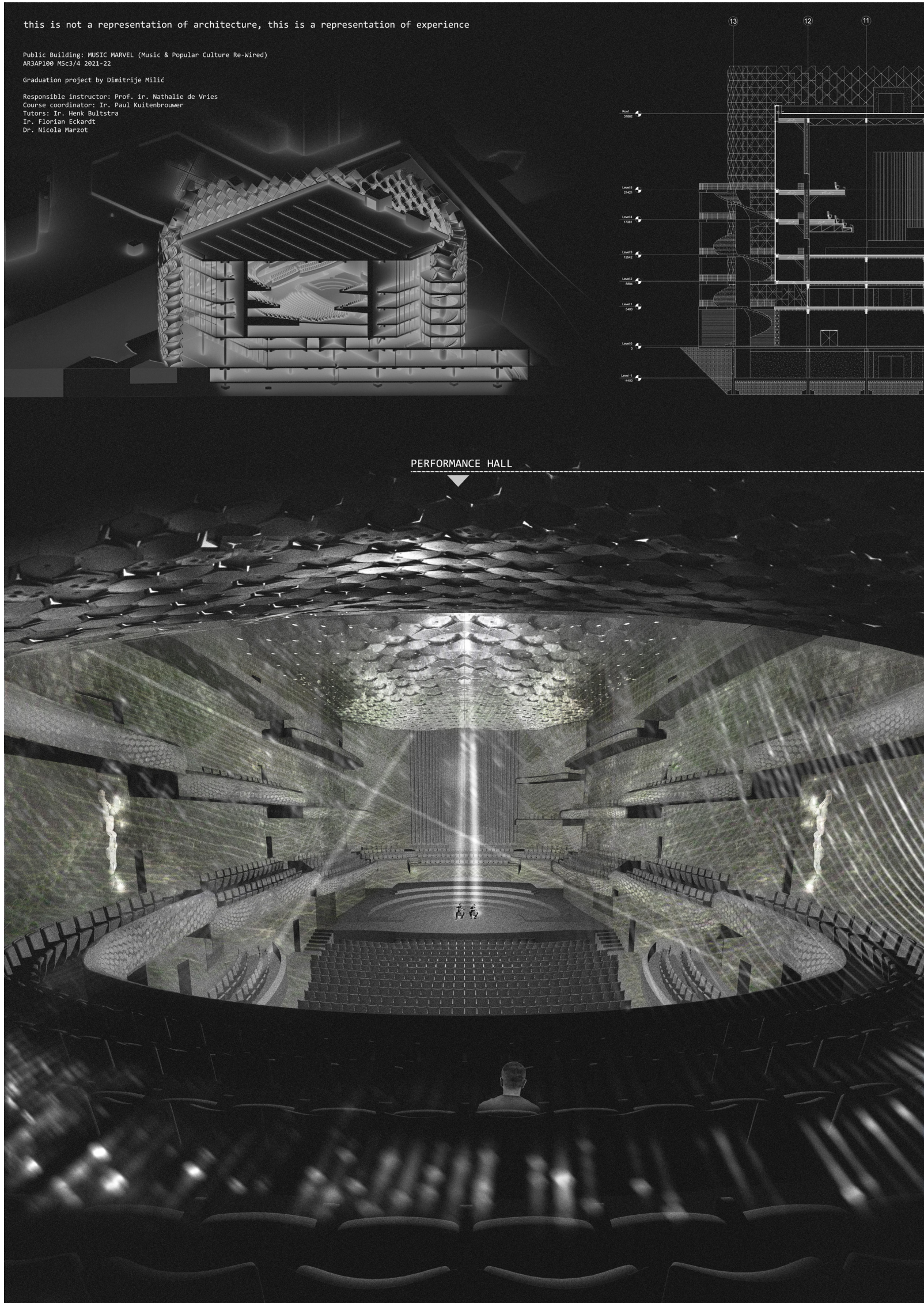
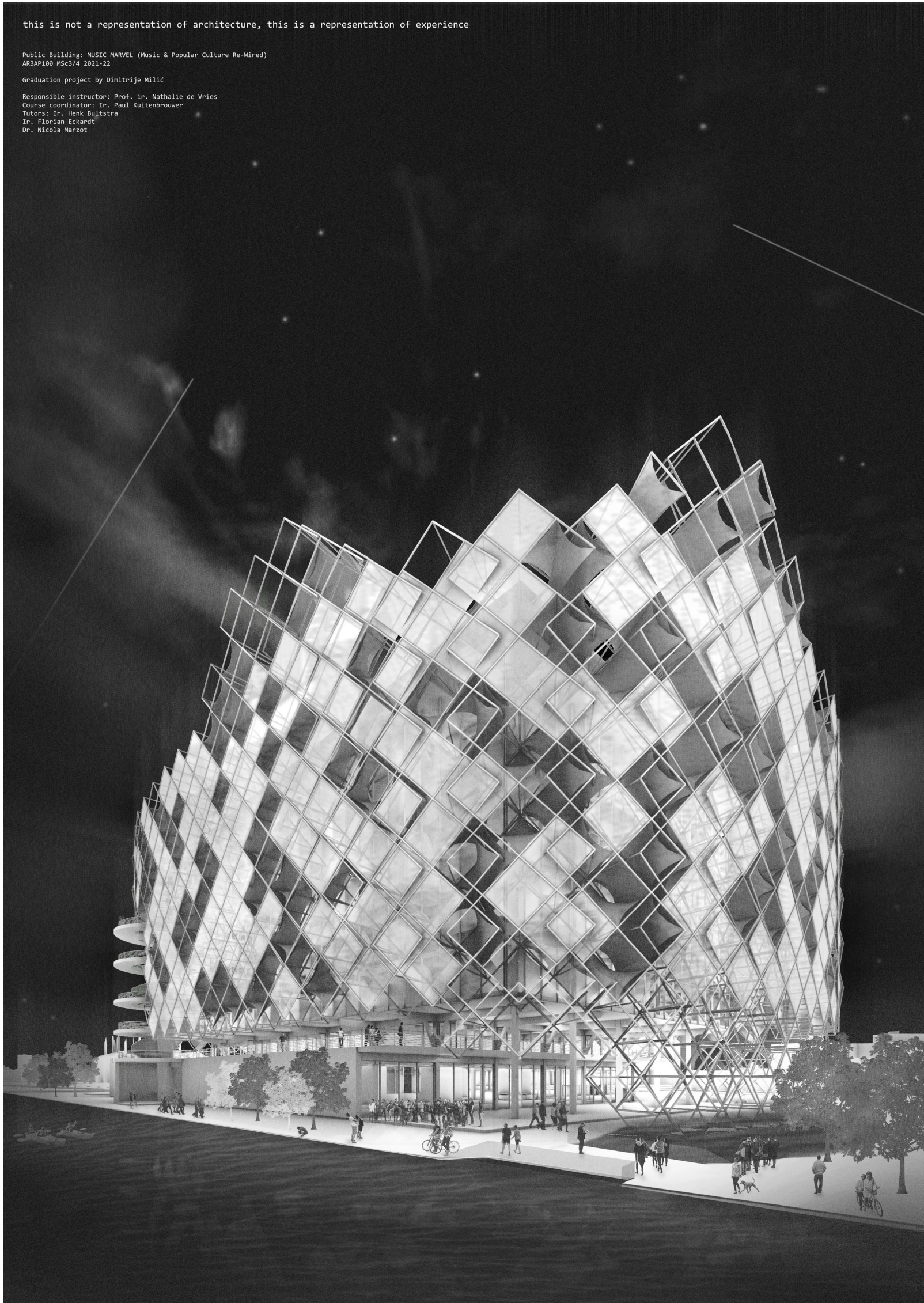
- 40 Aluminum profile for automated textile manipulation
- 41 Textile (recycled or photovoltaic)
- 42 Vertical steel beam with electrical instalations
- 43 Curtain wall - W(openable)
- 44 Steel profile connector
- 45 Embedded spotlight
- 46 Lower ceiling with contact cooling system with water pipe and gypsum board finish
- 47 CLT floor 200mm
- 48 Vapor and acoustic barrier
- 49 Cement screed with floor heating pipes 80mm
- 50 Timber laminated floor finish 10 mm

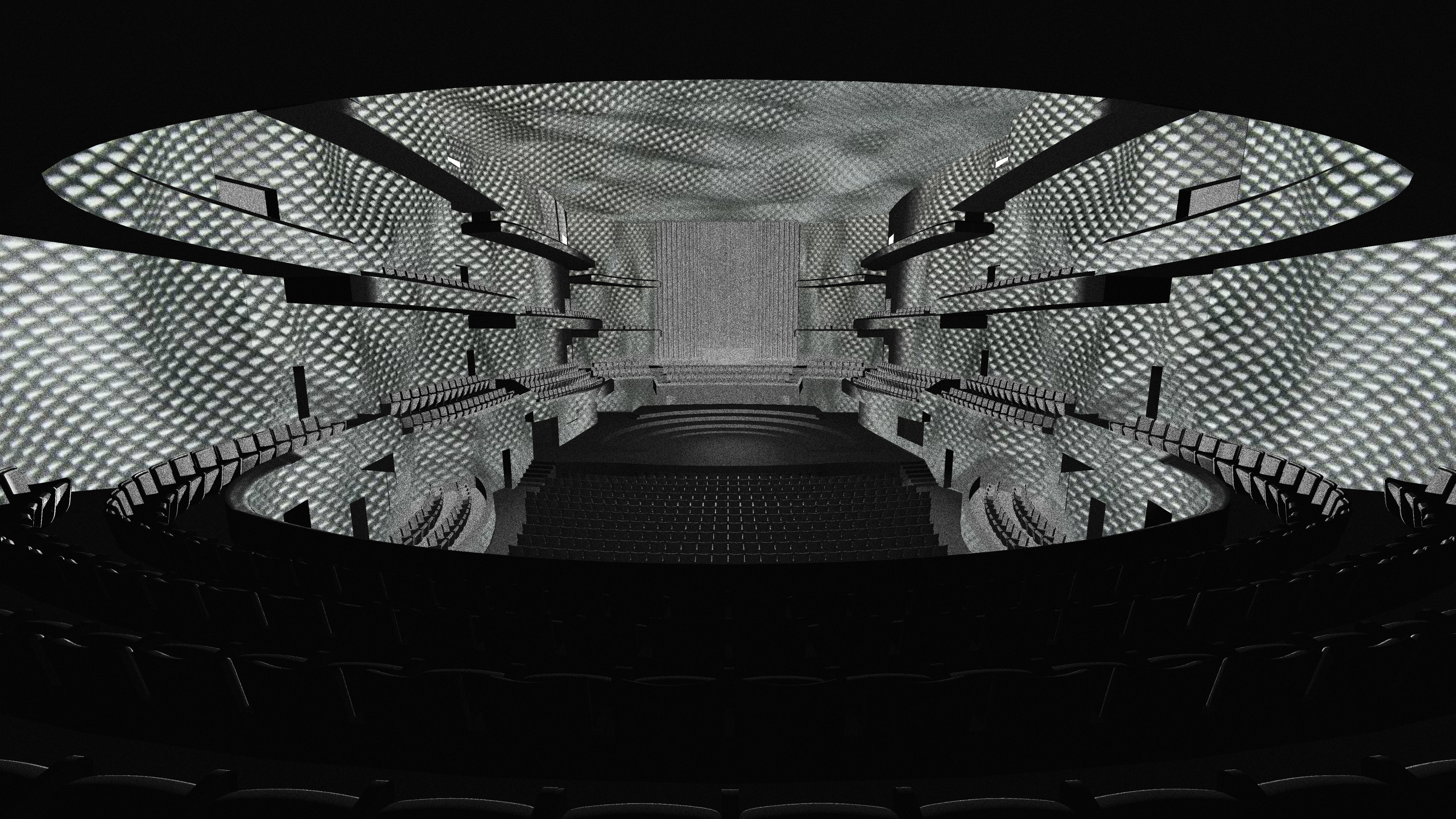














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THANK YOU!